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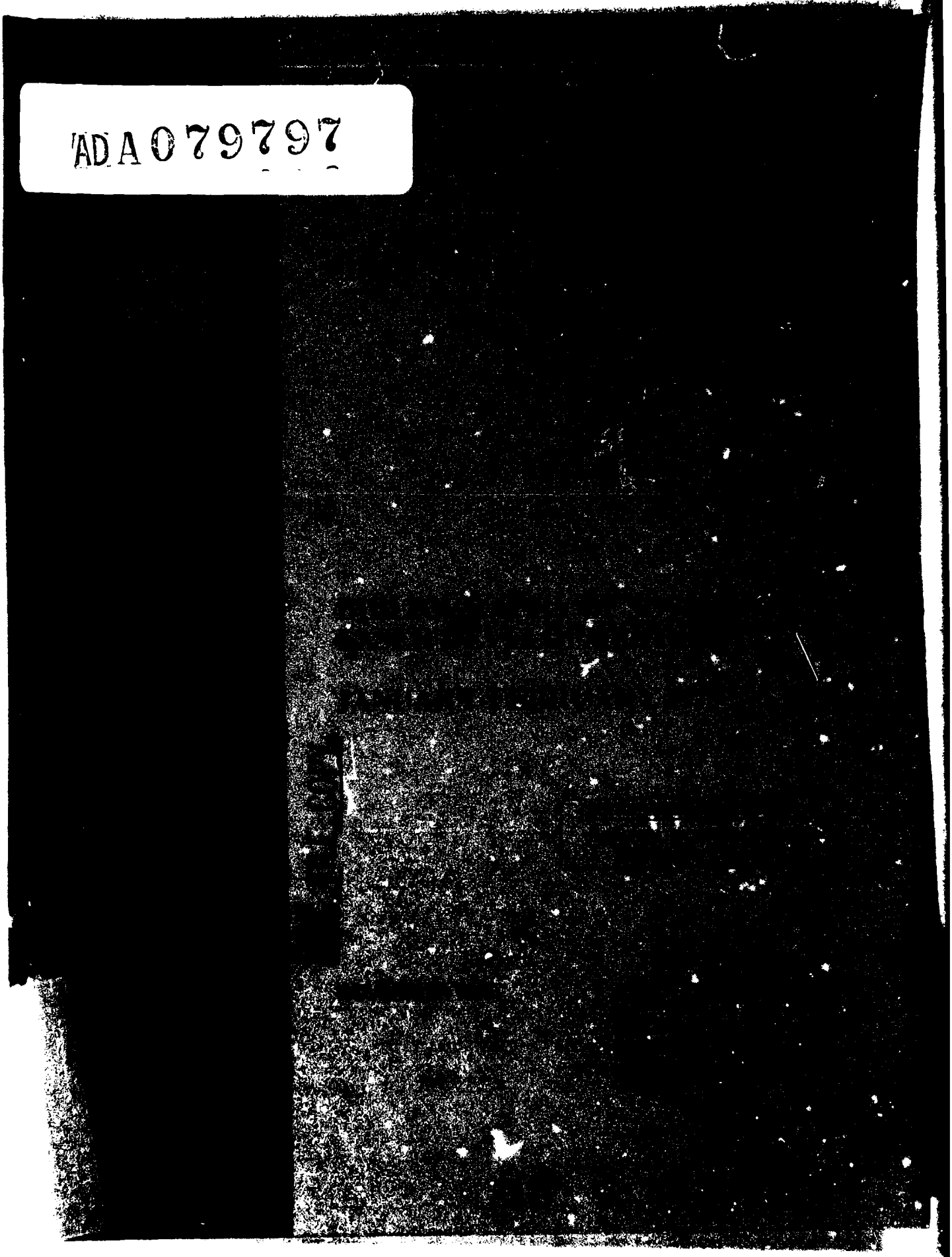

BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS

No. 39

JANUARY - FEBRUARY 1979

Date of Report

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Vice Director for Production
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Solid State Lasers, Liquid Lasers, Gas Lasers, Chemical Lasers, Laser Components, Nonlinear Optics, Spectroscopy of Laser Materials, Ultrashort Pulse Generation, Laser Theory, Laser Biological Effects, Laser Communications, Laser Beam Propagation, Laser Computer Technology, Holography, Laser Chemical Effects, Laser Parameters, Laser Measurement Applications, Laser-Excited Optical Effects, Laser Beam-Target Interaction, Laser Plasma

20. ABSTRACT

This is the Soviet Laser Bibliography for January-February 1979 and is no. 39 in a continuing series on Soviet laser developments. The coverage includes basic research on solid state, liquid, gas, and chemical lasers; components; nonlinear optics; spectroscopy of laser materials; ultrashort pulse generation; and general laser theory. Laser applications are listed under biological effects; communications; beam propagation; computer technology; holography; laser-induced chemical reactions; measurement of laser parameters; laser measurement applications; laser-excited optical effects; beam-target interaction; and plasma generation and diagnostics.

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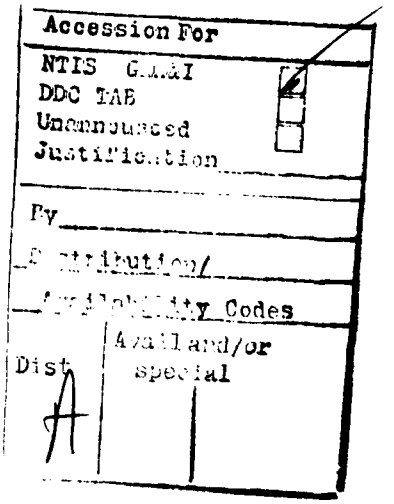
Introduction

This bibliography has been compiled under an interagency agreement as a continuing effort to document current Soviet-bloc developments in the quantum electronics field. The period covered is January-February 1979, and includes all significant laser-related articles received by us in that interval. The bulk of the entries come from the approximately 30 periodicals which are known to publish the most significant findings in Soviet laser technology. Citations from the Russian Reference Journals are included, as well as entries from the CIRC data base not otherwise covered. Laser items from the popular or semipopular press are generally omitted.

For convenience we have abbreviated frequently cited source names; a source abbreviations list and an author index are included. All sources cited with no parenthetical notation are available at the Library of Congress. A parenthetical entry (RZh, KL) indicates the secondary source in which the citation was found as a bibliographic entry or abstract, but for which the original source is not currently available at the Library. The authors' affiliations are indicated by the numbers in parentheses following the authors' names in the text and are listed in the Author Affiliations List. New affiliations are assigned a new number and are added to a cumulative list which includes all affiliations from 1969 to the present. Only those affiliations which appear in this issue are listed in this issue's Author Affiliations List.



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I. BASIC RESEARCH

A. SOLID STATE LASERS

1. Crystal: Ruby

1. Levashkevich, L.V. (0). Nanosecond ruby laser with electrooptic switching. Deposit at VINITI, no. 3151-78, 1978. (Cited in ZhPS, v. 30, no. 1, 1979, 184)

2. Avetisyan, Yu.O., A.O. Makaryan, K.M. Movsisyan, and P.S. Pogosyan (0). Generating frequency-tunable radiation in the millimeter range using the nonlinear combined output of two ruby lasers. ZhTF P, no. 4, 1979, 233-235.

2. Crystal: Rare-Earth Activated

a. Nd^{3+}

3. Begunkova, A.F., A.P. D'yachkov, V.A. Pis'mennyy, S.V. Prozorov, and I.F. Shubin (7). Thermal capacity and thermal conductivity of YAG:Nd. OMP, no. 1, 1979, 55-56.

4. Belousov, N.D., V.M. Bondarenko, S.Ya. Geguzina, V.A. Korniyenko, V.P. Martynov, B.I. Minkov, V.V. Okorokov, and V.S. Skorobogatov (188). Lasing spectral properties of Y_2SiO_5:Nd single crystals. Tr 1, 118-120. (RZhF, 2/79, 2D1129)

5. Konvisar, P.G., S.R. Rustamov, O.O. Silichev, and A.A. Fomichev (118). Continuously pumped solid-state laser in a strong modulation mode. ZhTF, no. 2, 1979, 386-388.

b. Miscellaneous Rare Earth

6. Tkachuk, A.M. (0). Spectral and lasing properties of concentrated rare-earth crystals. Sb 1, 57-71.

3. Crystal: Miscellaneous

7. Akhumyan, A.A., Zh.A. Arakelyan, G.V. Bukin, R.M. Martirosyan, and V.K. Ogneva (264,205). Quantum paramagnetic amplifier using [Cr^{3+}-doped] synthetic emerald crystals. KE, no. 1, 1979, 109-113.

8. Balashov, I.F., V.A. Berenberg, A.V. Lavrov, V.A. Pis'mennyy, V.S. Terpugov, and N.N. Chudinova (0). Lasing qualities and synthesis of $Nd_xLa_{1-x}P_5O_{14}$ crystals. NM, no. 1, 1979, 167-168.

9. Gayduk, M.I., V.V. Grigor'yants, M.Ye. Zhabotinskiy, A.A. Makovetskiy, and R.P. Tishchenko (15). Stimulated emission from a neodymium pentaphosphate microlaser pumped by a YAG:Nd^{3+} laser second harmonic. KE, no. 2, 1979, 412-414.

10. Goloyadov, V.A., V.S. Gorobchenko, S.V. Lopina, Yu.V. Naboykin, and L.A. Ogurtsova (36). Excitation of nonequilibrium phonons in a doped molecular crystal by ultrashort light pulses. UFZh, no. 1, 1979, 124-125.

11. Zinov'yev, P.V., Yu.V. Naboykin, L.A. Ogurtsova, and N.B. Silayeva (36). Use of luminescent polarization characteristics of pyrene in diphenyl crystals for lasing at the 0-0 transition frequency. UFZh, no. 1, 1979, 122-124.

4. Semiconductor: Simple Junction

a. CdS

12. Korneychuk, V.A., and M.P. Lisitsa (6). Stimulated emission in indirect zone-zone transitions in CdS. FTT, no. 2, 1979, 592-594.

b. ZnSe

13. Dudenkova, A.V., E.A. Senokosov, S.D. Skorbun, Yu.M. Popov, A.N. Usatyy, and V.M. Tsaran (1). Stimulated emission from ZnSe and ZnTe single crystal films grown on oriented sapphire substrates. KSpF, no. 4, 1978, 3-5. (RZhRadiot, 1/79, 1Ye138)

5. Semiconductor: Mixed Junction

14. Agayeva, A.A. (0). Recombination radiation of GaSe crystals and solid solution GaS_1Se_{1-x} under two-photon cavity excitation by an Nd laser. Sb 2, 53. (RZhRadiot, 2/79, 2Ye92)

15. Budennaya, L.D., I.B. Mizetskaya, T.P. Nuzhnaya, and E.V. Sharkina (136). Formation of solid solutions as a result of the interaction of CdTe and CdS. Sb 3, 97-106.

6. Semiconductor: Heterojunction

16. Bessonov, Yu.L., V.I. Borodulin, N.A. Vagner, M.V. Zverkov, V.P. Konyayev, V.N. Morozov, S.A. Pashko, A.S. Semenov, A.B. Sergeyev, and O.A. Utkina (1). Injection heterostructure laser with a small resonator length. KE, no. 2, 1979, 402-404.

17. Bryskiewicz, T. (NS). GaAs-$Al_1Ga_{1-x}As$ heterojunction from liquid phase. Elek, no. 7, 1978, 296-297. (RZhRadiot, 1/79, 1Ye134)

18. Bykovskiy, Yu.A., A.I. Yerko, and A.I. Larkin (16). Semiconductor laser with a holographic selector. KE, no. 2, 1979, 386-387.

19. Dyupi, R.D., P.D. Dapkus, N. Golon'yak, R.M. Kolbas, V.D. Leydig, and B.A. Voyak (0). $Al_xGa_{1-x}As$-GaAs heterolaser with quantum size effects in the active layers, produced by a continuous (300 K) gas-transport epitaxy method from metalloorganic compounds. ZhTF P, no. 3, 1979, 129-131.

20. Gulyayev, Yu.V., G.G. Dvoryankina, V.F. Dvoryankin, and N.Ya. Cherevatskiy (15). Molecular beam epitaxy: a promising method for production of integrated optical devices. Part 1. Injection lasers. KE, no. 1, 1979, 5-24.

21. Kovalenko, V.F., and I.Ye. Maronchuk (0). Using a variband semiconductor in a laser active region. Sb 3, 86-88.

7. Semiconductor: Theory

22. Bogatov, A.P., and K.A. Khayretdinov (1). Pulsed radiation source with variable parameters based on injection lasers with dispersed resonators. Fizicheskiy institut AN SSSR. Preprint, no. 199, 1978, 30 p. (RZhF, 2/79, 2D1614)

23. Goncharov, I.G., A.P. Grachev, K.B. Dedushenko, M.V. Zverkov, V.A. Kovalenko, and V.P. Konyayev (16). Time and spectral characteristics of e-beam pumped distributed feedback semiconductor lasers. KE, no. 1, 1979, 249-254.

24. Kozlovskiy, V.I., A.S. Nasibov, A.N. Pechenov, and Yu.M. Popov (1). Stimulated emission mechanism in laser screens made of II-IV compound semiconductors. KE, no. 1, 1979, 189-196.

25. Kuklev, V.P., Yu.V. Petrushenko, V.N. Ulasyuk, and V.V. Shubina (0). Sealed-off scanning semiconductor laser with transverse e-beam pumping. KE, no. 2, 1979, 354-357.

26. Shapiro, R.Kh. (0). Generation and amplification of electromagnetic waves in a ferrite-semiconductor structure. ZhTF P, no. 23, 1978, 1393-1396.

27. Yeliseyev, P.G. (0). Semiconductor lasers and converters. Itogi nauki i tekhniki. VINITI. Seriya Radiotekhnika, no. 14, part 1, 1978, 255 p. (KL, 3/79, 2185)

8. Glass: Nd

28. Batanov, V.A., A.N. Malkov, A.M. Prokhorov, and V.N. Fedorov (1). Using a reflecting laser plasma to develop new types of high-power neodymium lasers. Fizicheskiy institut AN SSSR. Preprint, no. 78, 1978, 26 p. (RZhF, 2/79, 2D1282)

29. Isbasescu, M. (NS). Q-switched laser. Studii si cercetari de fizica, no. 7, 1978, 695-724. (RZhF, 2/79, 2D1118)

9. Glass: Miscellaneous

30. Alekseyev, N.Ye., A.K. Gromov, A.A. Izyneyev, Yu.L. Kopylov, and V.B. Kravchenko (325). Thermal lenses in active elements of periodic-pulsed lasers. KE, no. 1, 1979, 140-145.

31. Dul'nev, G.N., V.I. Zemskiy, B.B. Krynetskiy, I.K. Meshkovskiy, A.M. Prokhorov, and O.M. Stel'makh (0). Tunable solid state laser using a microcomposite matrix material. ZhTF P, no. 17, 1978, 1041-1043. (RZhF, 1/79, 1D1323)

B. LIQUID LASERS

1. Organic Dyes

a. Rhodamine

32. Gondra, A.D., N.A. Kozlov, and V.G. Kolomiyets (0). External radiation pumping in a coaxial cell. ZhPS, v. 30, no. 2, 1979, 258-262.

33. Racz, B., Zs. Bor, G. Szabo, and Cs. Zoltan (NS). Subnanosecond relaxation oscillations in nitrogen laser-pumped dye lasers. Acta physica et chemica. Szeged, no. 4, 1977, 367-374. (RZhF, 1/79, 1D1325)

b. Polymethine

34. Przhonskaya, O.V., I.P. Il'chishin, Ye.A. Tikhonov, and Yu.L. Slomskiy (5). Lasing and photoisomer transformations in polymethine dyes. KE, no. 1, 1979, 31-37.

35. Przhonskaya, O.V., Ye.A. Tikhonov, and M.T. Shpak (5). Optimization of polymethine dye active media for lasers in the near IR. Institut fiziki AN UkrSSR. Preprint, no. 10, 1978, 44 p.

c. Phthalimide

36. Gruzinskiy, V.V., and S.V. Davydov (0). Lasing in the green spectral region by solutions of phthalimide and naphthalimide derivatives. ZhPS, v. 30, no. 1, 1979, 156-158.

d. Coumarin

37. Pedash, Yu.F., V.F. Pedash, A.V. Luzanov, and M.I. Dzyubenko (84). Electron structure of excited states of the coumarin molecule in a semiempirical model. Institut radiofiziki i elektroniki AN UkrSSR. Preprint, no. 84, 1977, 18 p.

e. Miscellaneous Dyes

38. Araratyan, Ye.A., S.A. Vartanyan, A.A. Melik-Sarkisyan, A.A. Nazaryan, and G.B. Torgomyan (0). Study of the lasing characteristics of 1,4-bis(2,5-dimethylstyryl) benzene excited by a UV N_2 laser. ZhPS, v. 30, no. 1, 1979, 159-160.

39. Davydov, S.V. (3). Study of the spectral-kinetic characteristics of pulsed complex organic compound lasers. Institut fiziki AN BSSR. Dissertation, 1978, 16 p. (KLDV, 1/79, p. 237)

40. Gladchanka, L.F., U.A. Kryvasheyev, M.S. Kozlov, L.R. Pikulik, and G.S. Shmanay (0). New lasing compounds: derivatives of benzo-f-quinolyl. IAN B, no. 5, 1978, 97-101,145. (RZhF, 2/79, 2D1160)

41. Grassme, W. (NS). Device for selecting dye laser wavelengths. Patent GDR, no. 128954, published 21 December 1977. (RZhRadiot, 2/79, 2Ye78)

42. Smirnova, T.N., and Ye.A. Tikhonov (5). Conical laser beam scattering in active dye solutions. KE, no. 1, 1979, 169-176.

2. Inorganic Liquids

43. Szczewski, M., and E. Januszewska (NS). Method for preparing a liquid for Nd-activated $POCL_3$ lasers. Patent Poland, no. 94783, published 30 December 1977. (RZhRadiot, 2/79, 2Ye81)

C. GAS LASERS

1. Simple Mixtures

a. He-Ne

44. Ciura, A.I., M. Ristici, and V. Vasiliu (NS). Short pulses from an He-Ne laser. Studii si cercetari de fizica, no. 8, 1978, 785-794. (RZhF, 2/79, 2D1167)

45. Glodz, M. (NS). Experimental dependence of two-photon absorption efficiency on mode selection and mode locking of an He-Ne laser. Acta physica polonica, v. A54, no. 2, 1978, 213-218. (RZhRadiot, 1/79, 1Ye49)

46. Gonchukov, S.A., V.M. Yermachenko, V.N. Petrovskiy, Ye.D. Protsenko, and A.N. Rurukin (0). Frequency characteristics of a dual-mode laser with smooth variation of intermode spacing. ZhPS, v. 30, no. 2, 1979, 240-245

47. Pavlov, P.A. (0). Tunable single-frequency He-Ne laser. Metrologiya, no. 2, 1979, 27-31.

48. Privalov, V.Ye., and Ye.A. Smirnov (0). Experimental study on the dynamic characteristics of an He-Ne laser discharge. OiS, v. 46, no. 1, 1979, 34-39.

b. He-Xe

49. Logvinov, V.I., I.P. Mazan'ko, and V.A. Tsar'kov (0). Study on the noise characteristics of an optical amplifier using an He-Xe mixture at 3.51 μ. RiE, no. 1, 1979, 91-94.

50. Logvinov, V.I., N.I. Reznichenko, and V.A. Tsar'kov (0). DC discharge plasma noise in an optical amplifier using an He-Xe mixture. RiE, no. 1, 1979, 95-98.

2. Molecular Beam and Ion

a. CO_2

51. Abil'siitov, G., L.I. Antonova, A.V. Artamonov, V.S. Golubev, S.V. Drobyazko, Yu.A. Yegorov, N.I. Katsuro, A.V. Kazhidub, F.V. Lebedev, Yu.M. Senatorov, Ye.M. Sidorenko, V.V. Sumerin, V.B. Turundayevskiy, and V.M. Frolov (0). Optimization of a 10 kw closed-cycle commercial CO_2 laser. KE, no. 1, 1979, 204-209.

52. Afonin, Yu.V., A.G. Ponomarenko, A.M. Orishich, and S.P. Shchalamov (193). Compact electric discharge CO_2 laser with 30 joule emission. PTE, no. 1, 1979, 178-180.

53. Apollonov, V.V., A.I. Barchukov, S.I. Derzhavin, I.G. Kononov, K.N. Firsov, Yu.A. Shakir, and B.A. Yamshchikov (1). Simple CO_2 amplifier. PTE, no. 1, 1979, 188-190.

54. Aver'yanov, N.Ye., and Yu.A. Baloshin (0). Calculating the characteristics of a photoionization TEA CO_2 laser. ZhPS, v. 30, no. 1, 1979, 56-60.

55. Baranov, V.Yu., V.G. Niz'yev, and S.V. Pigul'skiy (0). Gas-dynamic flow perturbations in periodic-pulsed CO_2 lasers. Part 1. Convective removal of heated gas from the discharge area. KE, no. 1, 1979, 177-183.

56. Baranov, V.Yu., B.Ya. Lyubimov, V.G. Niz'yev, and S.V. Pigul'skiy (0). Gas-dynamic flow perturbations in periodic-pulsed CO_2 lasers. Part 2. Acoustic waves. KE, no. 1, 1979, 184-188.

57. Bykov, P.A., V.Z. Galutin, V.P. Yepifanov, A.N. Sviridov, and V.R. Shumakov (0). Intermode beats in CO_2 lasers and their use in a self-tuned frequency system. PTE, no. 1, 1979, 183-184.

58. Bykov, P.A., V.P. Yepifanov, and A.N. Sviridov (0). Effect of acoustic interference and current fluctuation on CO_2 laser line beat width. PTE, no. 1, 1979, 185-188.

59. Dresvyannikov, V.G. (0). Instability of low temperature molecular plasma with negative ions. Sb 4, 133-137. (RZhF, 2/79, 2G94)

60. Drobyazko, S.V., and L.G. Zhuravskiy (0). Radiation characteristics of a repetitively pulsed CO_2 laser using an air-CO_2 mixture. KE, no. 1, 1979, 49-56.

61. Gonchukov, S.A., S.T. Kornilov, Ye.D. Protsenko, and S.N. Chirikov (0). Efficient waveguide CO_2 laser. ZhTF P, no. 1, 1979, 25-28.

62. Gordiyets, B.F., A.I. Gudzenko, and V.Ya. Panchenko (1,2). Solar-pumped gas laser using a CO_2-Br_2-He mixture. IAN Fiz, no. 2, 1979, 251-254.

63. Gordiyets, B.F., B. Kosma, A.G. Sviridov, and N.N. Sobolev (1). High-pressure wire-triggered pulsed CO_2 laser. KE, no. 2, 1979, 267-273.

64. Grigor'yants, V.V., B.A. Kusyakov, and A.M. Sinitsyn (326). Saturation in waveguide CO_2 lasers. KE, no. 2, 1979, 288-294.

65. Gutu, L., N. Comaniciu, V. Draganescu, C. Axinte, and I. Farcas (NS). Gas transport CO_2 laser with cylindrical geometry. Revue roumaine de physique, no. 5, 1978, 447-456. (RZhF, 1/79, 1D1382)

66. Karapuzikov, A.I. (0). Pulsed electric discharge CO_2 laser with parametric stabilization. PTE, no. 1, 1979, 181-182.

67. Kosma, B. (1). Study of pulsed CO_2 lasers with a transverse selfsustained discharge at medium and high pressures. Fizicheskiy institut AN SSSR. Dissertation, 1978, 22 p. (KLDV, 1/79, p. 239)

68. Kudryashov, V.P., V.V. Osipov, and V.V. Savin (78). Radiation pulse lengthening in a sectioned CO_2 laser with sequential excitation of the active medium. KE, no. 2, 1979, 417-421.

69. Muratov, Ye.A., V.D. Pis'mennyy, and A.T. Rakhimov (0). High-pressure periodic CO_2 laser with a nonselfsustained discharge and UV ionization. KE, no. 2, 1979, 370-372.

70. Orishich, A.M., A.G. Ponomarenko, and V.G. Posukh (0). Electric field distribution in an internal gas discharge controlled by an electron beam. ZhPMTF, no. 1, 1979, 16-21.

71. Podduyev, M.I. (471). Method of achieving inversion of vibrational populations in a CO_2-N_2-He(H_2O) gas mixture. KE, no. 2, 1979, 379-381.

72. Rubinov, Yu.A., and Yu.T. Mazurenko (0). Conditions for obtaining a uniform selfsustained discharge in high-pressure CO_2 lasers. ZhTF, no. 2, 1979, 389-394.

73. Stepanov, B.I., S.A. Trushin, and V.V. Churakov (3). Feasibility of generating high-power pulsed radiation at 4.3 μ in TEA CO_2 lasers. Institut fiziki AN BSSR. Preprint, no. 157, 1978, 10 p. (RZhF, 2/79, 2D1188)

74. Urin, B.M. (1). Theoretical study of the energy and spectral characteristics of CO_2 and CO electroionization lasers. Fizicheskiy institut AN SSSR. Dissertation, 1978, 16 p. (KLDV, 1/79, p. 244)

75. Zaroslov, D.Yu., N.V. Karlov, G.P. Kuz'min, D. McKen [Canadian], S.M. Nikiforov, and A.M. Prokhorov (1). Use of a grazing discharge for pre-ionization of pulsed gas-discharge lasers. IAN Fiz, no. 2, 1979, 230-236.

b. CO

76. Batyrbekov, G.A., V.A. Danilychev, A.A. Ionin, S.K. Kunakov, O.V. Komarov, M.P. Mardenov, N.N. Petrov, and M.U. Khasenov (444). Study of the plasma parameters and a nonselfsustained discharge in a $CO+N_2+He^3$ gas mixture, placed in the core of a nuclear reactor. ZhTF, no. 1, 1979, 55-61.

77. Orayevskiy, A.N., A.F. Suchkov, and Yu.N. Shebeko (1). Study on the effect of trace amounts of NO on the energy and spectral characteristics of a CO laser. Fizicheskiy institut AN SSSR. Preprint, no. 109, 1978, 24 p. (RZhF, 1/79, 1D1353)

78. Sokovikov, V.V. (1). Mechanism for forming population inversion in CO and CO_2 molecular lasers. Fizicheskiy institut AN SSSR. Dissertation, 1977, 22 p. (KLDV, 1/79, p. 243)

c. Argon

79. Donin, V.I., A.F. Shipilov, and V.A. Grigor'yev (10). High-power c-w ion lasers with an extended service life. KE, no. 2, 1979, 359-363.

d. N_2

80. Papakin, V.F., and A.Yu. Sonin (41). Cermet discharge chamber for an N_2 laser with transverse pumping. PTE, no. 1, 1979, 197-198.

e. CF_4

81. Averin, V.G., S.S. Alimpiyev, G.S. Baronov, N.V. Karlov, A.I. Karchevskiy, V.L. Martsynk'yan, Sh.Sh. Nabiyev, B.G. Sartakov, and E.M. Khokhlov (1). Optically-pumped tunable CF_4 laser. IAN Fiz, no. 2, 1979, 260-265.

f. Submillimeter

82. Manita, O.F. (34). Study of the characteristics of optically-pumped pulsed submillimeter lasers. Sb 3, 81-85.

g. Metal Vapor

83. Abrosimov, G.V., and V.V. Vasil'tsov (98). Characteristics of copper halide lasers. Deposit at VINITI, no. 3623-78, 29 November 1978, 9 p. (RZhF, 2/79, 2D1174)

84. Abrosimov, G.V., and V.V. Vasil'tsov (98). Study on the spectra of radiation from a copper vapor laser using copper halides. Deposit at VINITI, no. 3624-78, 29 November 1978, 10 p. (RZhF, 2/79, 2D1173)

85. Batenin, V.M., P.A. Vokhmin, V.S. Zhivopistsev, I.I. Klimovskiy, A.V. Morozov, L.A. Selezneva, and L.N. Pyatnitskiy (74). Inhomogeneous discharge in a copper vapor laser. TVT, no. 1, 1979, 208-209.

86. Bokhan, P.A., and V.I. Solomonov (78). Stimulated emission features of a dual-pulse-excited gas-discharge barium vapor laser. KE, no. 1, 1979, 134-139.

87. Dyatlov, M.K., Ye.P. Ostapchenko, V.A. Stepanov (0). Device for excitation of a metal vapor laser discharge tube. Author's certificate USSR, no. 460013, published 20 June 1978. (RZhRadiot, 2/79, 2Ye45)

88. Kazaryan, M.A., and A.N. Trofimov (1). Kinetics of vapor lasers using metal salts. KE, no. 2, 1979, 274-280.

89. Luemkemann, B. (NS). Device for shielding Brewster windows from metal vapor condensation. Patent GDR, no. 128962, published 21 December 1977. (RZhRadiot, 2/79, 2Ye67)

90. Subotinov, N.V., and N.K. Buchkov (NS). Metal vapor laser with a hollow cathode. Author's certificate Bulgaria, no. 24641, published 25 April 1978. (RZhRadiot, 2/79, 2Ye43)

h. Gasdynamic

91. Bakanov, D.G., and A.I. Fedoseyev (2). Study on the energy characteristics and optimization of resonator parameters in a gasdynamic CO_2 laser. Deposit at VINITI, no. 2948-78, 4 September 1978, 22 p. (RZhF, 1/79, 1D1390)

92. Bakhir, L.P., and Yu.V. Overchenko (0). Using IR spectroscopy to determine fluctuating population density levels in gasdynamic lasers. ZhPS, v. 30, no. 1, 1979, 44-55.

93. Fomin, N.A. (3). Effect of gasdynamic factors on the radiation characteristics and efficiency of thermally-pumped lasers. Institut fiziki AN BSSR. Dissertation, 1978, 12 p. (KLDV, 2/79, p. 2451)

94. Genich, A.P., N.V. Yevtyukhin, S.V. Kulikov, G.B. Manelis, and M.Ye. Solov'yeva (0). Calculating the gain in multicomponent active media in combustion-heated CO_2 gasdynamic lasers. ZhPMTF, no. 1, 1979, 34-43.

95. Ktalkherman, M.G., V.A. Levin, V.M. Mal'kov, and Yu.V. Tunik (0). Flow field and gain in the resonator cavity of a gasdynamic laser using kerosene combustion products. Two-dimensional calculation and comparison with experimental results. FGiV, no. 1, 1979, 84-89.

96. Kudryavtsev, N.N., S.S. Novikov, and I.B. Svetlichnyy (0). CO_2 temperature fluctuations in a CO_2+N_2+H_2 gasdynamic laser. FGiV, no. 1, 1979, 122-125.

97. Kulagin, Yu.A. (1). Active media for gasdynamic lasers. Tr 2, 110-178.

98. Petrov, G.I. (0). Problems of gas dynamics as applied to gasdynamic lasers. Sb 5, 45-51. (RZhRadiot, 2/79, 2Ye61)

99. Soloukhin, R.I., Yu.A. Yakobi, Ye.I. Vyazovich, and S.P. Vagin (193,180). Using a diametric fan in a flow-through laser with a closed gas circulation system. IFZh, v. 36, no. 1, 1979, 62-68.

3. Excimer

100. Basov, N.G., L.A. Vasil'yev, V.N. Volkov, V.A. Danilychev, O.M. Kerimov, A.I. Milanich, V.N. Lomakin, N.D. Ustinov, and T.S. Khachapuridze (1). Electroionization lasers using halides of noble gases. IAN Fiz, no. 2, 1979, 239-245.

101. Konovalov, I.N., and V.F. Tarasenko (466). An e-beam-pumped XeBr laser. KE, no. 2, 1979, 400-402.

4. Theory

102. Dyatlov, M.K., Yu.N. Kulikov, and V.A. Stepanov (0). Means of stabilizing power levels in a chemical vapor laser. Author's certificate USSR, no. 401289, published 20 June 1978. (RZhRadiot, 2/79, 2Ye141)

103. Gas lasers. Basic parameters. All-Union state standard USSR, GOST 23202-78. (RZhRadiot, 2/79, 2Ye1)

104. Glotov, Ye.P., V.A. Danilychev, A.Ye. Kruglyy, V.V. Pustovalov, A.M. Soroka, and N.V. Chaburkin (1). Angular divergence of electroionization laser radiation due to gasdynamic motion of the active medium during a pump pulse. Fizicheskiy institut AN SSSR. Preprint, no. 92, 1978, 12 p. (RZhF, 1/79, 1D1386)

105. Kruglov, V.I., L.V. Katkovskiy, and Yu.V. Khodyko (3). Probabilistic modeling of vibrationally nonequilibrium diatomic gases in radiation transfer theory. IFZh, v. 36, no. 2, 1979, 284-295.

106. Peschel, C., H. Orzegowski, and G. Theide (NS). Device for raising the output power of gas lasers with iterated resonators. Patent GDR, no. 128966, published 21 December 1977. (RZhRadiot, 1/79, 1Ye77)

107. Zhukov, V.V. (34). Study of active media for ion recombination lasers using chemical element vapors. Khar'kovskiy GU. Dissertation, 1978, 19 p. (KLDV, 1/79, p 238)

D. CHEMICAL LASERS

1. F_2+H_2(D_2)

108. Lavrov, A.V., V.A. Pospelov, A.V. Fedotov, and M.L. Shur (0). Numerical analysis of the lasing process in a c-w HF chemical laser. FGiV, no. 1, 1979, 89-97.

109. Virnik, Ya.Z., A.K. Piskunov, A.A. Stepanov, and V.A. Shcheglov (1). Diffraction effects in c-w HF chemical lasers with unstable telescopic resonators. KE, no. 1, 1979, 236-248.

2. Photodissociative

110. Ageyev, V.P., T.L. Andreyeva, V.I. Babkin, A.I. Maslov, I.I. Sobel'man, and Ye.A. Yukov (1). Possible use of alkali metals to obtain population inversion in atomic iodine. KE, no. 1, 1979, 151-157.

111. Basov, N.G., V.S. Zuyev, V.A. Katulin, A.Yu. Lyubchenko, V.Yu. Nosach, and A.L. Petrov (1). Study on the physical parameters of an iodine amplifier pumped by open high-current discharge radiation. KE, no. 2, 1979, 311-316.

112. Katulin, V.A., V.Yu. Nosach, and A.L. Petrov (1). Study on the characteristics of preamplifier stages of a narrow-pulse iodine laser. KE, no. 2, 1979, 304-310.

3. Transfer

113. Agroskin, V.Ya., B.G. Bravyy, G.K. Vasil'yev, and V.I. Kiryanov (67). Analysis of a design model for a pulsed chemical DF-CO_2 laser. KE, no. 2, 1979, 281-287.

114. Chebotarev, N.F., and S.Ya. Pshezhetskiy (0). Characteristics of DF-CO_2 energy transfer in chemical lasers using chlorine fluorides. KE, no. 1, 1979, 231-235.

115. Igoshin, V.I., V.Yu. Nikitin, and A.N. Orayevskiy (1). Feasibility of increasing the quantum yield and energy density in a DF-CO_2 chemical laser. KSpF, no. 6, 1978, 20-25. (RZhF, 2/79, 2D1206)

4. SF_6+H_2

116. Zapol'skiy, A.F., and K.B. Yushko (0). Electric-discharge laser using an SF_6-H_2 mixture pumped by an inductive storage. KE, no. 2, 1979, 408-411.

5. Miscellaneous

117. Chebotarev, N.F. (122). Study of ClF and HF chemical lasers. NI fiziko-khimicheskiy institut. Dissertation, 1978, 16 p. (KLDV, 1/79, p. 232)

118. Gershenzon, Yu.M., Ye.Ye. Nikitin, V.B. Rozenshteyn, and S.Ya. Umanskaya (0). Interaction of vibrationally excited molecules with chemically activated atoms. Sb 6, 3-65. (RZhF, 2/79, 2G393)

E. COMPONENTS

1. Resonators

a. Design and Performance

119. Bel'dyugin, I.M., M.G. Galushkin, and Ye.M. Zemskov (0). Properties of a resonator with wavefront-reversing mirrors. KE, no. 1, 1979, 38-44.

120. Belousova, L.A. (0). Nonorthogonal resonator theory. ZhPS, v. 30, no. 2, 1979, 253-257.

121. Isayev, S.K., L.S. Korniyenko, N.V. Kravtsov, N.I. Naumkin, B.G. Skuybin, and Yu.P. Yatsenko (98). Using optical delay lines to control the characteristics of solid state lasers. IAN Fiz, no. 2, 1979, 246-250.

122. Prokhorov, A.M., O.G. Semenov, K.F. Shipilov, and T.A. Shmaonov (1). Nonlinear effect of a high-power laser field on an optical resonator filled with a Kerr dielectric. IAN Fiz, no. 2, 1979, 363-365.

b. Mode Kinetics

123. Kozyrev, D.A., and P.V. Korolenko (2). Characteristics of the waveguide mode of a gas laser. VMU, no. 1, 1979, 75-78.

2. Pump Sources

124. Appelt, T., M. Sadavski, and S. Ugniewski (NS). Laser head with a removable spiral lamp and laser rod. Patent Poland, no. 94305, published 15 December 1977. (RZhRadiot, 1/79, 1Ye341)

125. Artamonov, I.I., B.A. Barikhin, V.V. Borovkov, and V.I. Kashintsov (0). Design and method of calculating an inductive accumulator for laser pumping. KE, no. 1, 1979, 127-133.

126. Azizov, E.A., and Yu.G. Gendel' (0). Overload protection for a laser flashlamp fed by an inductive storage. PTE, no. 1, 1979, 198-200.

127. Bychkov, Yu.I., Yu.D. Korolev, G.A. Mesyats, D.A. Noskov, L.N. Orlikov, V.V. Osipov, A.G. Filonov, and Ye.V. Chikin (466). Exciting a medium by an e-beam introduced through a gasdynamic aperture. IAN Fiz, no. 2, 1979, 226-229.

128. Davidyuk, N.Yu. (44). Research and development of high-power semiconductor light sources and their application in pumping systems for solid-state lasers. Institut prikladnoy fiziki AN MSSR. Dissertation, 1978, 15 p. (KLDV, 1/79, p. 237)

129. Dorogov, V.G., A.A. Shcherbakov, and A.V. Yakovlev (0). Applying the Monte Carlo method to laser pumping systems. ZhPS, v. 30, no. 2, 1979, 246-252.

130. Gora, M. (NS). Nanosecond current pulse generator (40 ns, 55 Å) as power supply for injection lasers. Elek, no. 9, 1978, 385-388. (RZhRadiot, 2/79, 2Ye275)

131. Kabelka, V., and V. Smil'gyavichyus (49). Highly efficient parametric conversion of ultrashort light pulses under optimum interaction conditions. IAN Fiz, no. 2, 1979, 272-275.

132. Klimovskiy, I.I., and L.A. Selezneva (74). Operation of a circuit with a resonant overcharge storage capacity for excitation of self-terminating-transition lasers. TVT, no. 1, 1979, 27-30.

133. Kwiecinski, A., and W. Kuczynski (NS). Power supply for a pulsed laser. Patent Poland, no. 87521, published 15 July 1977. (RZhRadiot, 1/79, 1Ye340)

134. Valyavko, V.V., B.V. Krylov, and A.A. Mozgo (0). Pulsed laser power pack. ZhPS, v. 30, no. 1, 1979, 180-183.

3. Deflectors

135. Dymaczewski, H., L. Sczaniecki, and Z. Sczaniecki (NS). Device for adjusting the coaxiality of optical elements. Patent Poland, no. 92604, 15 December 1977. (RZhRadiot, 2/79, 2Ye171)

136. Kruglov, V.A., S.V. Kirillov, V.I. Primakov, and G.M. Sharonov (0). Light deflector. Author's certificate USSR, no. 587436, published 10 January 1978. (RZhMetrolog, 1/79, 1.32.14443)

137. Opran, M.E., M. Tudor, A. Harsany, V. Miclaus, and G. Mityko (NS). Electromechanic laser beam deflector. Patent Romania, no. 64127, published 15 April 1974. (RZhRadiot, 1/79, 1Ye172)

138. Pilipovich, V.A., A.I. Konoyko, and V.I. Polyakov (0). Increased resolving power of a discrete electrooptic deflector. IAN B, no. 5, 1978, 123-125. (RZhF, 2/79, 2D1629)

139. Stepanenko, A.S. (3). Optical deflector feed device. Author's certificate USSR, no. 624354, published 4 August 1978. (RZhRadiot, 2/79, 2Ye161)

4. Attenuators

140. Mikheyev, V.P., V.M. Ivanov, V.S. Balitskiy, A.D. Zakirova, and A.N. Chuvyrov (477). Radiation attenuator for wavelengths in the 0.25 - 1.0 μ range, with an attenuation factor of up to 10^5. PTE, no. 1, 1979, 244-245.

5. Diffraction Gratings

141. Bel'tyugov, S.I., V.V. Vertoprakhov, and Yu.V. Troitskiy (75). Simple diffractional mode selector. KE, no. 2, 1979, 364-367.

142. Bozhevol'nyy, S.I., Ye.M. Zolotov, V.A. Kiselev, and Ye.A. Shcherbakov (1). Study of diffraction gratings induced in $LiNbO_3$ for integrated optics. KE, no. 2, 1979, 367-370.

143. Efficiency of holographic diffraction gratings, based on a light-sensitive $AS_2Se_3As_2Ag$ system. Sb 7, 61-63. (RZhRadiot, 1/79, 1Ye545)

144. Gerke, R.R., and T. Dubrovina (0). Spectral characteristics of holographic diffraction gratings. Sb 7, 74-75. (RZhRadiot, 1/79, 1Ye575)

145. Klitzsch, E., R. Renner, and S. Polze (NS). Device for holographic preparation of diffraction gratings with nonsymmetric line profiles. Patent GDR, no. 129247, published 4 January 1978. (RZhRadiot, 1/79, 1Ye596)

146. Kovalev, A.A., G.L. Nekrasov, V.A. Pilipovich, Yu.V. Razvin, and S.V. Serak (0). Self-diffraction of laser radiation by liquid crystals. ZhTF P, no. 3, 1979, 159-160.

147. Prokhorov, A.M., A.A. Spikhal'skiy, and V.A. Sychugov (1). Study of the process of light diffraction in deep dielectric gratings. IAN Fiz, no. 2, 1979, 276-281.

6. Beam Splitters

148. Krsek, J. (NS). Laser interference beam splitter. Author's certificate Czechoslovakia, no. 172444, published 15 May 1978. (RZhRadiot, 2/79, 2Ye273)

7. Mirrors

149. Knyazev, R.S., B.B. Meshkov, and P.P. Yakovlev (0). Antireflection coating. Author's certificate USSR, no. 584272, published 24 January 1978. (RZhRadiot, 1/79, 1Ye350)

150. Vorobeychikov, E.S., B.L. Pivovarov, L.N. Popov, and B.N. Poyzner (47). Selecting laser resonator mirror reflectances for intraresonator modulation. PTE, no. 1, 1979, 193-194.

8. Detectors

151. Abramov, A.P., I.K. Razumova (0). Quantum meters for IR radiation using activated crystals. Sb 1, 175-187.

152. Galus, W., and T. Persak (NS). Thermal coefficients of resistance and sensitivity in uncooled (Cd,Hg)Te photodetectors for recording rapidly varying 10.6 μ radiation. BWAT, no. 10, 1978, 23-28. (RZhF, 2/79, 2D1601)

153. Galus, W., and J. Piotrowski (NS). Feasibility of attaining the detectibility limit in heterodyne detection of 10.6 μ radiation by means of uncooled photodetectors. BWAT, no. 9, 1978, 75-81. (RZhF, 2/79, 2D1600)

154. Gol'dshteyn, Yu.A., and B.Ya. Frezinskiy (0). Determining the time position of a periodic train of optical pulses. Radiotekhnika, no. 10, 1978, pp not given. (RZhRadiot, 2/79, 2Ye307)

155. Vinetskiy, V.L., M.A. Itskovskiy, L.S. Kremenchukskiy, and V.B. Samoylov (5). Radiation detector. Author's certificate USSR, no. 501296, published 25 July 1977. (RZhF, 2/79, 2D1604)

156. Vystavkin, A.N., E.E. Godik, V.I. Gubankov, Sh.M. Kogan, T.M. Lifshits, F.Ya. Nal', and A.V. Frantsesson (0). Ultrasensitive detector of electromagnetic radiation. Sb 8, 41-122. (RZhRadiot, 1/79, 1Ye394)

157. Zakharchenya, B.P., Ye.I. Terukov, A.K. Fel'k, F.A. Chudnovskiy, and Z.I. Shteyngol'ts (0). Visualization of c-w e-m radiation on a phase transformational interference reversible reflector material. ZhTF P, no. 20, 1978, 1201-1204. (RZhF, 2/79, 2D1603)

158. Zamora, T.Ye., V.P. Marinets, and B.V. Osyka (81). Method for recording local optical flux in noise. Author's certificate USSR, no. 550537, published 13 April 1977. (RZhF, 2/79, 2D1650)

9. Modulators

159. Andreyev, A.S., Yu.V. Gulyayev, Ye.M. Korablev, N.M. Lyndin, V.V. Proklov, A.M. Prokhorov, and V.A. Sychugov (0). High-frequency plane acoustooptical light modulation using $LiNbO_3$ crystal surfaces. Mikroelektronika, no. 5, 1978, 426-429. (RZhRadiot, 2/79, 2Ye159)

160. Anikeyev, B.V. (136). Study of a dual Pockels cell in a laser with active spectral phasing. Sb 3, 77-80.

161. Arsen'yev, V.V., I.N. Matveyev, and A.N. Stepanov (0). Parameter control of microsecond pulsed radiation. RiE, no. 1, 1979, 105-108.

162. Berezhnoy, A.A., M.F. Dubovik, Yu.V. Popov, and T.N. Sherstneva (0). Electrooptical properties of $Ba_{0.39}Sr_{0.61}Nb_2O_6$ crystals. OiS, v. 46, no. 1, 1979, 104-108.

163. Byszewski, W., A. Baranowski, R. Cicsielewski, and R. Sliwka (NS). Device for Q-switching a gas laser resonator. Patent Poland, no. 94385, published 31 December 1977. (RZhRadiot, 1/79, 1Ye165)

164. Gurevich, V.Z. (7). Study of a photoelectrooptic effect in various crystals for spatial modulation of light. Gosudarstvennyy opticheskiy institut. Dissertation, 1978, 21 p. (KLDV, 1/79, p. 237)

165. Hermann, J. (NS). Deformation and shortening of ultrashort optical pulses by an optically controlled absorber in the excited state. ETP, no. 4, 1978, 343-348. (RZhF, 2/79, 2D1285)

166. Makogonenko, A.G., B.S. Neporent, and Ye.B. Verkhovskiy (0). Frequency locking in lasers coupled by a passive switch. OiS, v. 46, no. 1, 1979, 113-118.

167. Markus, F.A. (0). Light modulator noise in a coherent optical system. Sb 9, 108-125.

168. Melishchuk, I.S., G.A. Melkov, and V.D. Tron'ko (0). Microwave modulation of light using ferromagnetics. RiE, no. 2, 1979, 407-410.

169. Nakhmanson, G.S., V.M. Yanyshev (0). Acoustooptic processing of wide-band signals by two-dimensional phased antenna grids. IVUZ Radioelektr, no. 2, 1979, 76-79.

170. Prishutov, A.A., and V.Ye. Terent'yev (0). Pulse generator feed for acoustooptic switches. PTE, no. 1, 1979, 94-96.

171. Solomko, A.A., V.S. Sidorenko, V.N. Stepanenko, A.V. Skudnov, Yu.T. Onys'ko, and V.A. Mel'nik (0). Microwave modulation of laser radiation in the 1-10 GHz frequency range. RiE, no. 1, 1979, 109-113.

172. Volkonskiy, V.B., A.A. Golovkov, D.A. Kalinikos, Yu.P. Popov, A.I. Chernyayev, L.N. Shvetsov, and V.V. Yakovlev (0). Electrooptic SHF light modulation. Author's certificate USSR, no. 575602, published 3 November 1977. (RZhRadiot, 1/79, 1Ye162)

F. NONLINEAR OPTICS

1. Frequency Conversion

173. Andreyev, R.B., V.D. Volosov, and V.S. Gorshkov (0). Laser system with parametric frequency conversion. OiS, v. 46, no. 2, 1979, 376-381.

174. Andreyeva, N.P., S.A. Andreyev, I.N. Matveyev, S.M. Pshenichnikov, and N.D. Ustinov (0). Parametric conversion of the medium IR region in zinc-germanium diphosphide. KE, no. 2, 1979, 357-359.

175. Dmitriyev, V.G., and Ye.A. Shalayev (0). Lengthening of a YAG:Nd^{3+} laser pulse under conditions of electrooptic Q-switching with intracavity second harmonic generation. KE, no. 1, 1979, 225-230.

176. Griban', V.N., and L.N. Ovander (274). Generating third harmonics under resonant conditions. UFZh, no. 1, 1979, 1-7.

177. Gubin, M.A., V.V. Nikitin, V.N. Petrovskiy, Ye.D. Protsenko, D.A. Tyurikov, and L.P. Yatsenko (1). Study on dual-mode He-Ne/CH_4 laser frequency shifts and stability. KE, no. 1, 1979, 63-71.

178. Malz, Von D., and K. Schindler (NS). Frequency down-conversion in $LiIO_3$. ETP, no. 3, 1978, 309-312. (RZhRadiot, 1/79, 1Ye157)

179. Mel'nik, L.P., N.N. Filonenko, and A.I. Kholodnykh (210). Limitation of frequency doubler efficiency due to longitudinal optical inhomogeneity of nonlinear crystals. KE, no. 1, 1979, 25-30.

180. Vasilev, Ya., S. Dinev, K. Stamenov, and I. Tomov (NS). Converting a single-mode Nd laser frequency to the visible and UV bands. Sb 10, 185-188. (RZhF, 1/79, 1D1247)

181. Volosov, V.D., N.Ye. Korniyenko, V.N. Krylov, A.I. Ryzhkov, and V.L. Strizhevskiy (0). Phase effects during intraresonator second harmonic generation. OiS, v. 46, no. 1, 1979, 119-126.

182. Voronin, E.S., V.L. Strizhevskiy (2,51). Parametric upconversion of IR radiation and its application. UFN, v. 127, no. 1, 1979, 99-133.

183. Yermakov, V.P., I.S. Kabanov, and V.F. Shabanov (210). Device for measuring second harmonic intensity variation in liquids. PTE, no. 1, 1979, 190-192.

2. Parametric Processes

184. Golubev, Yu.M. (0). Statistics of an electromagnetic field parametrically interacting with a medium. OiS, v. 46, no. 2, 1979, 398-400.

185. Krochik, G.M. (0). Parametric amplification based on four-wave parametric processes in two-photon resonance. KE, no. 2, 1979, 295-303.

186. Mishchenko, V.A., G.D. Myl'nikov, and D.N. Sobolenko (0). Unsteady parametric stimulated emission of far IR radiation. KE, no. 1, 1979, 146-150.

187. Solomko, A.A., Yu.A. Gayday, and V.I. Maystrenko (51). Study of the discrete spectral structure of parametrically excited waves. Sb 3, 28-49.

188. Zhdanov, B.V., N.I. Zheludov, A.I. Kovrigin, and V.I. Kuznetsov (2). Study of magnetooptical effects in the range of molecular vibration resonances using parametric oscillators. KE, no. 2, 1979, 349-350.

3. Stimulated Scattering

a. Raman

189. Dzhotyan, G.P. (0). Excitation and amplification of anti-Stokes waves during stimulated Raman scattering of wide-band pumping. IAN Arm, no. 3, 1978, 238-240. (RZhRadiot, 2/79, 2Ye12)

190. Fabian, H., A. Lau, W. Wernke, M. Pfeiffer, K. Lenz, and H.J. Weigmann (East Germans). Contributions of first excited and electron ground states to resonant stimulated Raman scattering. KE, no. 1, 1979, 72-77.

191. Fisher, P.S. (15). Parametric resonance interactions during stimulated Raman scattering. Institut radiotekhniki i elektroniki AN SSSR. Dissertation, 1978, 20 p. (KLDV, 2/79, p. 242)

192. Karpenko, S.G., F.N. Marchevskiy, and V.L. Strizhevskiy (51). Stimulated Raman emission excited by a polariton within a laser resonator. Sb 3, 49-62.

193. Kormer, S.B., V.D. Nikolayev, and V.D. Urlin (0). Radiation divergence from a Raman laser with a slowly relaxing active medium. KE, no. 2, 1979, 372-375.

194. Kravtsov, N.V., and N.I. Naumkin (98). Mode-locking from generation of stimulated Raman emission. KE, no. 2, 1979, 375-377.

195. Sokolovskaya, A.I., G.L. Brekhovskikh, A.D. Kudryavtseva, and N.V. Okladnikov (1). Wavefront reconstruction and optical self-focusing in stimulated Raman scattering. KSpF, no. 7, 1978, 27-32. (RZhF, 2/79, 2D1091)

b. Brillouin

196. Basov, N.G., I.G. Zubarev, A.V. Kotov, S.I. Mikhaylov, and M.G. Smirnov (1). Weak signal wavefront reversal under nonthreshold reflection from a Brillouin mirror. KE, no. 2, 1979, 394-397.

197. Kormer, S.B., S.M. Kulikov, V.D. Nikolayev, A.V. Senik, and S.A. Sukharev (0). Possible application of stimulated Brillouin scattering for enhanced contrast in laser radiation. ZhTF P, no. 4, 1979, 213-216.

c. Miscellaneous Scattering

198. Apanasevich, P.A., A.A. Afanas'yev, and S.P. Zhvavyy (0). Nonstationary light scattering on free carriers in semiconductors. IAN Fiz, no. 2, 1979, 350-354.

199. Betin, A.A. (94). Stimulated scattering of spatially inhomogeneous optical beams. Gor'kovskiy GU. Dissertation, 1978, 12 p. (KLDV, 1/79, p. 236)

200. Odintsov, V.I. (2). Theory of stimulated optical scattering under wideband and spatially-nonuniform pumping. Deposit at VINITI, no. 2675, 10 August 1978, 58 p. (RZhF, 1/29, 1D1207)

201. Ragul'skiy, V.V. (0). Formation of weak beam wave fronts during stimulated light scattering. ZhTF P, no. 4, 1979, 251-254.

4. Self-focusing

202. Arakelyan, S.M., G.A. Vardanyan, V.A. Vysloukh, G.A. Lyakhov, V.A. Makarov, and Yu.S. Chilingaryan (37). Effect of nonlinear spatial dispersion on liquid crystals, using self-focusing lasers. Theory and experiment. IVUZ Radiofiz, no. 1, 1979, 55-61.

5. Acoustic Interaction

203. Gordiyenko, V.M., A.B. Reshilov, and V.I. Shmal'gauzen (2). Role of temperature nonlinearity in the thermal mechanism of sound pulse generation by laser radiation. KE, no. 2, 1979, 383-385.

204. Gulyayev, Yu.V., and G.N. Shkerdin (15). Diffraction of light by sound in active media. Institut radiotekhniki i elektroniki AN SSSR. Preprint, no. 7, 1978, 66 p. (RZhRadiot, 1/79, 1Ye2)

205. Kavetskaya, I.V., N.N. Sibel'din, V.B. Stopachinskiy, and V.A. Tsvetskov (1). Excitation of sound pulses in liquid ^{4}He using optical pumping of germanium. DAN SSSR, v. 244, no. 3, 1979, 559-562.

206. Lyamshev, M.L., V.G. Mikhalevich, and G.P. Shipulo (1). Thermal excitation of acoustic waves in an absorbing medium by periodic sequences of short laser pulses. Akusticheskiy zhurnal, no. 1, 1979, 146-148.

6. General Theory

207. Barashev, V.A., V.M. Semibalamut, and Ye.A. Titov (10). Interaction between a standing frequency-modulated wave and a two-level molecular gas. KE, no. 2, 1979, 261-266.

208. Belkin, S.N., S.A. Moskalenko, A.Kh. Rotaru, and P.I. Khadzhi (0). Nonlinear coherent effects in the exciton spectral region. IAN Fiz, no. 2, 1979, 355-362.

209. Bityurin, N.M., V.I. Bredikhin, and V.N. Genkin (426). Two-photon absorption and the energy spectrum of $LiNbO_3$ and α-$LiIO_3$. IAN Fiz, no. 2, 1979, 332-336.

210. Bol'shov, L.A., T.K. Kirichenko, and A.P. Favorskiy (71). Numerical analysis of fine-scale instability in the coherent interaction of optical pulses with resonantly absorbing media. Institut prikladnoy matematiki AN SSSR. Preprint, no. 52, 1978, 49 p. (RZhF, 2/79, 2D1053)

211. Bonch-Bruyevich, A.M., S.G. Przhibel'skiy, and V.V. Khromov (0). Nonlinear optical phenomena in atomic collisions. IAN Fiz, no. 2, 1979, 397-404.

212. Borshch, A.A., and M.S. Brodin (5). Nonlinear polarizability of some binary and compound semiconductors. IAN Fiz, no. 2, 1979, 337-349.

213. Bresler, M.S., O.B. Gusev (4). Cyclotron resonance from nonlinear optical resonance in n-InSb. ZhETF, v. 76, no. 2, 1979, 724-735.

214. Chirkin, A.S., and F.M. Yusubov (0). Focusing partially coherent light beams. Determining the phase of the spatial correlation function. Sb 11, 4. (RZhRadiot, 2/79, 2Ye286)

215. Chmela, P. (NS). Using lasers in nonlinear optics. Jemna mechanika a optika, no. 7, 1978, 185-192. (RZhF, 2/79, 2D1041)

216. Golubev, Yu.M. (0). Statistics of an e-m field emitted in a two-photon process. OiS, v. 46, no. 1, 1979, 3-7.

217. Korolev, F.A., N.V. Znamenskiy, and V.I. Odintsov (0). Stimulated emission during multiphoton excitation of an atom above the ionization limit. ZhETF P, v. 28, no. 7, 1978, 453-456. (RZhF, 2/79, 2D1073)

218. Meysner, L.B., and N.G. Khadzhiyski (2). Third order nonlinear susceptibility of iodine crystals near Raman and two-photon resonances. KE, no. 2, 1979, 345-348.

219. Odintsov, A.I., R.I. Sokolovskiy, and V.P. Yakunin (2). Polarization properties of superluminescent gases in a high-current discharge. IAN Fiz, no. 2, 1979, 255-259.

220. Oleynik, V.P. (0). Effect of collective excitation on the character of quantum processes of scattering in an external e-m field. Sb 3, 88-97.

206. Lyamshev, M.L., V.G. Mikhalevich, and G.P. Shipulo (1). Thermal excitation of acoustic waves in an absorbing medium by periodic sequences of short laser pulses. Akusticheskiy zhurnal, no. 1, 1979, 146-148.

6. General Theory

207. Barashev, V.A., V.M. Semibalamut, and Ye.A. Titov (10). Interaction between a standing frequency-modulated wave and a two-level molecular gas. KE, no. 2, 1979, 261-266.

208. Belkin, S.N., S.A. Moskalenko, A.Kh. Rotaru, and P.I. Khadzhi (0). Nonlinear coherent effects in the exciton spectral region. IAN Fiz, no. 2, 1979, 355-362.

209. Bityurin, N.M., V.I. Bredikhin, and V.N. Genkin (426). Two-photon absorption and the energy spectrum of $LiNbO_3$ and α-$LiIO_3$. IAN Fiz, no. 2, 1979, 332-336.

210. Bol'shov, L.A., T.K. Kirichenko, and A.P. Favorskiy (71). Numerical analysis of fine-scale instability in the coherent interaction of optical pulses with resonantly absorbing media. Institut prikladnoy matematiki AN SSSR. Preprint, no. 52, 1978, 49 p. (RZhF, 2/79, 2D1053)

211. Bonch-Bruyevich, A.M., S.G. Przhibel'skiy, and V.V. Khromov (0). Nonlinear optical phenomena in atomic collisions. IAN Fiz, no. 2, 1979, 397-404.

212. Borshch, A.A., and M.S. Brodin (5). Nonlinear polarizability of some binary and compound semiconductors. IAN Fiz, no. 2, 1979, 337-349.

213. Bresler, M.S., O.B. Gusev (4). Cyclotron resonance from nonlinear optical resonance in n-InSb. ZhETF, v. 76, no. 2, 1979, 724-735.

214. Chirkin, A.S., and F.M. Yusubov (0). Focusing partially coherent light beams. Determining the phase of the spatial correlation function. Sb 11, 4. (RZhRadiot, 2/79, 2Ye286)

215. Chmela, P. (NS). Using lasers in nonlinear optics. Jemna mechanika a optika, no. 7, 1978, 185-192. (RZhF, 2/79, 2D1041)

216. Golubev, Yu.M. (0). Statistics of an e-m field emitted in a two-photon process. OiS, v. 46, no. 1, 1979, 3-7.

217. Korolev, F.A., N.V. Znamenskiy, and V.I. Odintsov (0). Stimulated emission during multiphoton excitation of an atom above the ionization limit. ZhETF P, v. 28, no. 7, 1978, 453-456. (RZhF, 2/79, 2D1073)

218. Meysner, L.B., and N.G. Khadzhiyski (2). Third order nonlinear susceptibility of iodine crystals near Raman and two-photon resonances. KE, no. 2, 1979, 345-348.

219. Odintsov, A.I., R.I. Sokolovskiy, and V.P. Yakunin (2). Polarization properties of superluminescent gases in a high-current discharge. IAN Fiz, no. 2, 1979, 255-259.

220. Oleynik, V.P. (0). Effect of collective excitation on the character of quantum processes of scattering in an external e-m field. Sb 3, 88-97.

221. Orayevskiy, A.N. (1). Possible use of resonance excited material for wavefront reversal. KE, no. 1, 1979, 218-224.

222. Samartsev, V.V., Ye.I. Shtyrkov (0). Light echo and its application. Sb 1, 108-116.

223. Smolenskiy, G.A., V.A. Isupov, S.A. Ktitorov, V.A. Trepakov, and N.K. Yushin (4). Status of ferroelectric physics. IVUZ Fiz, no. 1, 1979, 5-39.

224. Zapasskiy, V.S., and P.P. Feofilov (0). Nonlinear optical Faraday effect in crystals with paramagnetic centers. IAN Fiz, no. 2, 1979, 299-303.

G. SPECTROSCOPY OF LASER MATERIALS

225. Adamushko, A.V., I.M. Gulis, A.N. Rubinov, B.I. Stepanov, and V.I. Tomin (0). Heterogeneous spectral widening in polar rhodamine dye solutions. OiS, v. 46, no. 1, 1979, 64-69.

226. Ashurov, M.Kh., Yu.K. Voron'ko, V.V. Osiko, and A.A. Sobol' (0). Spectroscopic study on the structure of disordered garnet crystals with rare-earth metal impurities. Sb 1, 71-83.

227. Bagayev, V.S., G.L. Belen'kiy, M.O. Godzhayev, V.V. Zaytsev, E.Yu. Salayev, and V.B. Stopachinskiy (1). Characteristics of thermal intensity dependence of recombination radiation in GaS_xSe_{1-x} crystals. ZhETF P, v. 29, no. 1, 1979, 50-54.

228. Danilov, V.V., G.G. Dyadyusha, A.A. Rykov, Yu.L. Slominskiy, and K.V. Timofeyev (0). Spectral luminescent properties of ketocyanine alcohol solutions. OiS, v. 46, no. 1, 1979, 70-75.

229. Dzhurinskiy, B.F., and G.A. Bandurkin (0). Crystal chemical characteristics of rare-earth metal compounds. Sb 1, 7-11.

230. Kaminskiy, A.A., and L. Li (0). Transition intensities of rare-earth ions in laser crystals. Sb 1, 45-57.

231. Kozma, L., S. Foldeak, M. Molnar, E. Farkas, and P. Hegyes (Hungarians). Spectral-fluorescent study of photodecomposition of organic matter. ZhPS, v. 30, no. 2, 1979, 281-286.

232. Mazur[illegible], Z., W. Strek, and B. Jezowska-Trzebiatowska (NS). Spectroscopic properties of Nd^{3+}-doped arsenate glasses. Acta physica polonica, v. A54, no. 2, 1978, 203-211. (RZhF, 2/79, 2D887)

233. Przhevuskiy, A.K. (0). Inhomogeneous spectral structure of glasses activated by rare-earth metal ions. Sb 1, 96-108.

234. Zakharov, N.A., Ye.F. Kustov, V.S. Krikorov, S.Yu. Stefanovich, and V.B. Loshchenov (0). Spectral properties of $La_2Ti_2O_7$ single crystals doped with neodymium. ZhTF P, no. 17, 1978, 1043-1046. (RZhF, 1/79, 1D942)

H. ULTRASHORT PULSE GENERATION

235. Nasibov, A.S., A.Z. Obidin, A.N. Pechenov, Yu.M. Popov, and V.A. Frolov (0). Using a streamer semiconductor laser to generate picosecond light pulses. ZhTF P, no. 1, 1979, 22-25.

236. Schramm, W. (NS). Device for obtaining picosecond laser pulses. Patent GDR, no. 129257, published 4 January 1978. (RZhRadiot, 2/79, 2Ye278)

J. CRYSTAL GROWING

K. THEORETICAL ASPECTS OF ADVANCED LASERS

L. GENERAL LASER THEORY

237. Al'perin, M.M., and Ya.D. Klubis (478). Coherent states and diffusion of superradiance. Deposit at VINITI, no. 3369-78, 26 October 1978, 14 p. (RZhF, 2/79, 2D1046)

238. Badziak, J., and Z. Jankiewicz (NS). Noncoherent two-photon amplification of a laser pulse. Acta physica polonica, v. A53, no. 6, 1978, 877-890. (RZhF, 1/79, 1D1196)

239. Baklanov, Ye.V., B.Ya. Dubetskiy, and V.M. Semibalamut (159). Theory on stimulated coherent atomic radiation in spatially diverse optical fields. ZhETF, v. 76, no. 2, 1979, 482-504.

240. Baranov, S.A. (0). Multiquantum transitions in molecules from the action of a stochastic e-m field. IAN MSSR. Seriya fiziko-tekhnicheskikh i matematicheskikh nauk, no. 2, 1978, 83-85. (RZhF, 1/79, 1D1193)

241. Blok, V.R., G.M. Krochik, and Yu.G. Khronopulo (174). Eliminating forbidden absorption [transitions] in strong light fields, and excitation of polyatomic molecules. ZhETF, v. 76, no. 1, 1979, 46-53.

242. Brodin, M.S., M.S. Soskin, and M.T. Shpak (5). Developments in optical quantum electronics, nonlinear optics and holography at the Institute of Physics of the Ukrainian Academy of Sciences. UFZh, no. 2, 1979, 243-256.

243. Brodov, M.Ye., F.F. Kamenets, V.V. Korobkin, A.M. Prokhorov, and R.V. Serov (1). Controlled inversion profile amplifier as a soft aperture. KE, no. 2, 1979, 377-379.

244. Bulgakov, A.A., S.I. Khankina, and V.M. Yakovenko (0). Nonlinear vibrational excitation in the millimeter and submillimeter ranges in semiconductors and dielectrics. Sb 12, 62. (RZhRadiot, 1/79, 1Ye139)

245. Dul'nev, G.N., V.I. Zemskiy, B.B. Krynetskiy, I.K. Meshkovskiy, A.M. Prokhorov, and O.M. Stel'makh (30). Solid state tunable lasers using a microcomposite matrix material. IAN Fiz, no. 2, 1979, 236-238.

246. Gordon, G.B. (0). Recombination radiation reactions and photo-recombination lasers. Sb 5, 25-34. (RZhRadiot, 2/79, 2Ye65)

247. Izmaylov, I.A., V.A. Kochelap, Yu.A. Kukibnyy, and S.I. Pekar (0). Photocombination laser triggered by a shock wave. ZhTF P, no. 4, 1979, 228-232.

248. Labzovskiy, L.N., and O.T. Sklyarov (12). Coherent and quasienergetic states of a two-level atom in a strong monochromatic field. Leningradskiy GU. Vestnik, no. 16, 1978, 7-13. (RZhF, 2/79, 2D1061)

249. Moskaleva, T.A. (0). Laser development trends in the U.S. Tr 3, 97-101. (RZhF, 1/79, 1D1250)

250. Pokrovskiy, L.A. (0). Method of a nonequilibrium statistical operator in the theory of a single-mode laser based on two-level atoms. Teoreticheskiya i matematicheskaya fizika, no. 1, 1978, 102-117. (RZhF, 2/79, 2D1111)

251. Shostko, S.N., Ya.G. Podoba, Yu.A. Anan'yev, V.D. Volosov, and A.V. Gorlanov (0). Possibility of compensating for optical inhomogeneities in laser systems. ZhTF P, no. 1, 1979, 29-30.

252. Strokovskiy, G.A. (0). Competition of opposed waves at the center line of isotope amplification. OiS, v. 46, no. 2, 1979, 404-405.

253. Vinetskiy, V.L., A.S. Matveychuk, Ye.N. Sal'kova, L.G. Sukhoverkhova, M.S. Soskin, and G.A. Kholoder' (0). Amplification of optical beams in semiconductors with a linear electrooptic effect. Sb 7, 15-16. (RZhRadiot, 1/79, 1Ye631)

254. Zeyger, S.G., and Ye.B. Pelyukhova (0). Stability of a stationary lasing system with coupled generator and amplifier. OiS, v. 46, no. 2, 1979, 356-365.

II. LASER APPLICATIONS

A. BIOLOGICAL EFFECTS

255. Avramenko, B.I., V.G. Volodin, Z.I. Losovskaya, V.A. Mostovnikov, Zh.N. Fomina, and I.V. Khokhlov (473). Mutagenic laser action on wheat and barley seeds. DAN B, no. 10, 1978, 951-954.

256. Dzhugeli, B.P., and Ye.G. Matinyan (0). Methods of holographic recording in opthalmology. Sb 7, 190-191. (RZhRadiot, 1/79, 1Ye630)

257. Gvozdev, M.I., A.I. Kirillov, V.I. Kishko, V.F. Morskov, A.S. Naumov, and N.D. Ustinov (7). Method of laser dosimetry. OMP, no. 2, 1979, 50-54.

258. Kochubey, S.M., F.A. Guliyev, and A.A. Smirnov (474). Applications of laser spectrofluorimetry to the study of photosynthetic particles. DAN SSSR, v. 244, no. 3, 1979, 743-746.

259. Lysenkov, N.V., I.V. Radchenko, and N.F. Gamaleya (225). Laser action on lactadehydrogenase. DAN Ukr. Seriya B, no. 1, 1979, 59-61.

260. Miroshnikov, M.M. (7). Optical devices for medicine and biology. OMP, no. 1, 1979, 1-5.

261. Moskalik, K.G., and A.P. Kozlov (100). Effect of pulsed laser radiation on mitotic activity and the synthesis of DNA in tumor cells. DAN SSSR, v. 244, no. 1, 1979, 206-208.

262. Niechoda, Z. (NS). Health hazards and safety conditions in working with lasers. Part 1. Types of danger and their evaluation, from regulations established at various research centers. Pomiary, Automatyka, Kontrola, no. 7, 1978, 224-227. (RZhRadiot, 1/79, 1Ye508)

263. Utyamyshev, I.R. (0). Methods for holographic synthesis of three-dimensional images for medical x-ray diagnosis. Sb 7, 186-187. (RZhRadiot, 1/79, 1Ye629)

B. COMMUNICATIONS SYSTEMS

264. Akhmediyev, N.N., and V.D. Samoylenko (0). Optical waveguide with mode selection. OiS, v. 46, no. 1, 1979, 127-129.

265. Balayev, V.I., E.S. Masunov, and A.Ye. Shikanov (453). Designing lightguides with a variable refractive index. Deposit at VINITI, no. 2464-78, 20 July 1978, 14 p. (RZhF, 2/79, 2D1412)

266. Belanov, A.S., Ye.M. Dianov, and A.M. Prokhorov (1). Data transmission over quasi-single-mode three-layer optical waveguides. KE, no. 1, 1979, 197-203.

267. Belov, A.V., and Ye.M. Dianov (1). Study of the dependence of total loss in glass fiber optic waveguides on the radiation coupling angle. KE, no. 2, 1979, 404-407.

268. Borisov, E.V., and A.T. Serobabin (0). Reception of encoded communications during information transmission by optical cables. Elektrosvyaz', no. 10, 1978, 38-41. (RZhRadiot, 1/79, 1Ye324)

269. Botvinkin, M.I., T.V. Bukhtiarova, A.A. Dyachenko, M.Ye. Zhabotinskiy, and T.A. Ivanov (15). Method for manufacturing a fiber lightguide. Author's certificate USSR, no. 539476, published 20 February 1978. (RZhRadiot, 2/79, 2Ye236)

270. Brehm, P. (NS). Communication lines and cables with fiber lightguides. Patent GDR, no. 127314, published 14 September 1977. (RZhRadiot, 2/79, 2Ye183)

271. Bykov, A.M., A.V. Volyar, and L.M. Kuchikyan (435). Effect of multimode capillary lightguides on light polarization. UFZh, no. 1, 1979, 132-134.

272. Dianov, Ye.M., S.K. Isayev, L.S. Korniyenko, N.V. Kravtsov, and V.V. Firsov (98,1). Raman laser with a lightguide resonator. IAN Fiz, no. 2, 1979, 266-271.

273. Dzhibladze, M.I., M.Ye. Perel'man, G.M. Rubinshteyn, V.S. Chagulov, and T.Ya. Chelidze (40). Nonlinearity of light propagation in waveguides. IAN Fiz, no. 2, 1979, 292-295.

274. Fussgaenger, K., and H.J. Matt (NS). Development level of optical lightguide communications technology. Part 1. Nachrichtentechnik-Elektronik, no. 8, 1978, 249-252. (RZhRadiot, 2/79, 2Ye240)

275. Generalov, I.P., V.S. Golubkov, and N.N. Ivanov (0). Application of universal connectors to fiber optic systems. Sb 13, 75-77. (RZhRadiot, 2/79, 2Ye214)

276. Goncharenko, A.M., and A.B. Sotskiy (0). Theory of optical waveguide phase modulators. DAN B, no. 9, 1978, 788-790. (RZhRadiot, 1/79, 1Ye168)

277. Goncharov, I.G., A.P. Grachev, K.B. Dedushenko, M.V. Zverkov, and V.P. Konyayev (16). Radiation coupling from an e-beam excited semiconductor laser with distributed feedback. KE, no. 1, 1979, 104-108.

278. Gordon, G.I., and I.I. Teumin (0). Pulse propagation in a low-mode lightguide. Elektrosvyaz', no. 10, 1978, 13-16. (RZhRadiot, 1/79, 1Ye216)

279. Grigor'yants, V.V., V.S. Lozyuk, A.Ya. Oleynikov, N.A. Tikhomirov, Yu.K. Chamorovskiy (0). Precise measurement of full loss spectra in fiber optics. RiE, no. 2, 1979, 209-212.

280. Grigor'yants, V.V., Yu.V. Gulyayev, M.Ye. Zhabotinskiy, A.V. Sokolov, V.P. Sosnin, V.T. Potapov, A.V. Frantsesson, A.D. Shatrov, and V.V. Shevchenko (0). Fiber optic communication lines. Sb 8, 147-223. (RZhF, 2/79, 2D1413)

281. Grinev, A.Yu., and Ye.N. Voronin (0). Radiooptic methods for received beam formation in nonplanar antennas. IVUZ Radioelektr, no. 2, 1979, 25-33.

282. Grinev, A.Yu., and A.N. Bratchikov (0). Imaging formation in a multimode planar lightg ide. Zarubezhnaya radioelektronika, no. 9, 1978, 122-132. (RZhRadiot, 1/79, 1Ye220)

283. Kalinenko, A.N., and S.D. Tvorogov (78). Statistical change in radiation in an optical communications channel. Sb 3, 110-116.

284. Kobzev, V.V., V.A. Rozhanskiy, and I.P. Generalov (0). Noise rejection of a pulse-code modulated transmission signal in optical communication lines using a multifrequency laser. Sb 13, 56-68. (RZhRadiot, 2/79, 2Ye308)

285. Kolodziejak, W. (NS). Comparison of videodisk systems with capacitive (RCA) and laser (Thompson) reproduction. Wiadomosci telekomunikacyjne, no. 7-8, 1978, 224-225. (RZhRadiot, 1/79, 1Ye436)

286. Kuteva, Z.N., R.K. Makarova, N.N. Nechayeva, A.N. Poplavskiy, and B.K. Sologub (0). Regulating device for beam reception in a confocal lens system. Author's certificate USSR, no. 575620, published 11 November 1977. (RZhRadiot, 2/79, 2Ye271)

287. Maciak, T. (NS). Methods for preparing thin-film dielectric waveguides. Elek, no. 7, 1978, 289-292. (RZhRadiot, 2/79, 2Ye231)

288. Mitrofanov, A.S., V.A. Tarlykov, and A.B. Veselovskiy (0). Device for monitoring the diameter of optical fibers. Sb 14, 6-9. (RZhRadiot, 2/79, 2Ye199)

289. Oganesyan, A.V. (0). Transmission of still images by optical communications channels. Elektrosvyaz', no. 10, 1978, 22-24. (RZhRadiot, 1/79, 1Ye325)

290. Opran, M.E., A. Harsany, V. Miclaus, and G. Mityko (NS). Monochromatic laser system for reproducing data on a large screen using a TV method of laser beam deflection. Patent Romania, no. 64125, published 25 November 1977. (RZhRadiot, 1/79, 1Ye433)

291. Popescu, N.G., M.E. Opran, A. Harsany, V. Miclaus, and G. Mityko (NS). Monochromatic or color system of videotelephone communication, carried by laser beam. Patent Romania, no. 65005, published 10 September 1977. (RZhRadiot, 2/79, 2Ye350)

292. Schroefel, J. (NS). Technology and properties of planar dielectric lightguides made from passive and active materials. Sdelovaci technika, no. 8, 1978, 285-288. (RZhRadiot, 2/79, 2Ye208)

293. Schroefel, J. (NS). Planar dielectric lightguides prepared by diffusion processes. Sdelovaci technika, no. 9, 1978, 331-333. (RZhRadiot, 1/79, 1Ye226)

294. Smolenskiy, G.A., M.A. Garsia, S.A. Mironov, A.N. Ageyev, T.A. Shaplygina, B.P. Trubintsyn, and O.P. Obrubov (4). Interaction of optical modes with standing surface elastic waves in a plane $LiNbO_3$ waveguide. IAN Fiz, no. 2, 1979, 282-286.

295. Smolenskiy, G.A., E.P. Stinser, M.A. Garsia, A.N. Ageyev, S.A. Mironov, Ye.S. Sher, and T.K. Trofimova (4). Independent optical systems using ferrite film waveguides. IAN Fiz, no. 2, 1979, 287-291.

296. Szalay, M. (NS). Fiber optic systems in radioelectronics. Part 2. Finommechanika, mikrotechnika, no. 5, 1978, 133-136,159,160. (RZhRadiot, 2/79, 2Ye221)

297. Trusov, A.G. (0). Calculating arrival time of optical signals in a system with free space photon counting. Radiotekhnika, no. 9, 1978, 91-93. (RZhRadiot, 1/79, 1Ye417)

298. Vinogradov, S.S., and V.I. Yakovlev (0). Laser-acoustic delay lines. Tr 4, 126-131. (RZhF, 2/79, 2Zh415)

C. BEAM PROPAGATION

1. In the Atmosphere

299. Aksenov, V.P., and V.L. Mironov (78). Effect of the amplification of backscattering under conditions of strong intensity fluctuations. IVUZ Radiofiz, no. 2, 1979, 140-149.

300. Arsen'yan, T.I., and A.A. Semenov (0). Correlation-adaptive method for receiving optical signals in a randomly inhomogeneous troposphere. Sb 15, 110-113. (RZhGeofiz, 1/79, 1B324)

301. Balin, Yu.S., G.M. Krekov, I.V. Samokhvalov, and R.F. Rakhimov (0). Effect of humidity on lidar scattering in the atmosphere. Meteorologiya i gidrologiya, no. 8, 1978, 114-119. (RZhGeofiz, 1/79, 1B130)

302. Belov, N.N., N.P. Datskevich, Ye.K. Karlova, N.V. Karlov, N.N. Kononov, G.P. Kuz'min, A.Ye. Negin, S.M. Nikiforov, and N.A. Fuks (1). Channel for [aerosol] dispersal and formation of plasma breakdown in an aerosol under CO_2 laser irradiation. ZhTF, no. 2, 1979, 333-338.

303. Bukroyev, Yu.N., M.M. Beylinson, A.I. Klimin, and V.G. Ovcharenko (0). Possibilities of measuring [humidity] by radiooptic methods. Sb 16, 43-49. (RZhGeofiz, 1/79, 1B90)

304. Cheremukhin, A.M. (0). Optical methods for determining intensity peaks in light beams propagating in a turbulent atmosphere. Sb 9, 216-225.

305. Galich, N.Ye. (29). Plane problems of aerothermooptics. IFZh, v. 36, no. 2, 1979, 320-326.

306. Gurvich, A.S., and V. Kan (64). Measuring a four-point coherence function of a laser radiation field in a turbulent atmosphere. IVUZ Radiofiz, no. 2, 1979, 190-197.

307. Gurvich, A.S., B.S. Yelepov, Vl.V. Pokasov, K.K. Sabel'fel'd, and V.I. Tatarskiy (64). Spatial structure of strong intensity fluctuations of light in a turbulent medium. IVUZ Radiofiz, no. 2, 1979, 200-207.

308. Kolosov, V.V., and A.V. Kuzikovskiy (78). Focusing and defocusing of light from aerosol explosions in a laser beam. ZhTF, no. 1, 1979, 101-104.

309. Lukin, V.P., and I.P. Lukin (78). Propagation of modulated waves in a turbulent atmosphere. Sb 3, 116-123.

310. Matviyenko, G.G., and I.V. Samokhvalov (0). Using correlation analysis in laser measurements of wind velocity. Metrologiya i gidrologiya, no. 7, 1978, 99-103. (RZhGeofiz, 1/79, 1B129)

311. Melua, A.I. (476). Tentative methodological recommendations on preparing, collating and using lidar studies of the air quality of an urban basin. Deposit at VINITI, no. 3426-78, 31 October 1978, 30 p. (RZhGeofiz, 2/79, 2B63)

312. Mishareva, N.I. (0). Effect of a turbulent medium on the characteristics of an optical detector. Sb 17, 32-35. (RZhRadiot, 2/79, 2Ye301)

313. Nosov, V.V. (132). Fluctuations in the direction of propagation and size of laser beams in a turbulent atmosphere. Tomskiy GU. Dissertation, 1977, 16 p. (KLDV, 1/79, p. 241)

314. Pokasov, V.V., G.Ya. Patrushev, V.P. Lukin, A.I. Petrov, and O.N. Yemaleyev (0). Field fluctuations of a reflected beam in a turbulent atmosphere. Sb 15, 122-125. (RZhGeofiz, 1/79, 1B395)

315. Shuleykin, V.N. (134). Determining the transparency of the atmosphere and the characteristics of the cloud cover by lidar methods. Tsentral'naya aerologicheskaya observatoriya. Dissertation, 1978, 13 p. (KLDV, 2/79, p. 243)

316. Shuleykin, V.N., S.F. Kalachinskiy, and M.K. Golovin (377). Laser instrument for measuring the transparency of optically dense media. Tr 5, 35-40. (RZhGeofiz, 1/79, 1B180)

317. Smirnov, V.A., and A.A. Zborovskiy (0). Overcoming heavy atmospheric conditions on optical communications channels. Radiotekhnika, no. 10, 1978, 89-91. (RZhRadiot, 2/79, 2Ye281)

318. Sochor, V., and J. Blabla (NS). Optical methods for detecting atmospheric pollution. Jemna mechanika a optika, no. 7, 1978, 193-197. (RZhF, 1/79, 1D1156)

319. Vorob'yev, V.V. (64). Evaluating the intensity of sound arising from the propagation of modulated laser beams in the atmosphere, and its effect on thermal defocusing of the beams. KE, no. 2, 1979, 327-330.

2. In Liquids

3. Theory

320. Alekseyev, I.M., and P.N. Svirkunov (0). Radiation scattering by a particle with a thermal aureole. OiS, v. 46, no. 1, 1979, 162-164.

321. Anchutkin, V.S., and V.I. Shmal'gauzen (2). Scattering of coherent radiation by an oscillating diffuse reflector. VMU, no. 1, 1979, 47-51.

322. Dubik, A. (NS). Some notes on the description of Gaussian beam propagation. Journal of Technical Physics [Poland], no. 2, 1978, 257-265. (RZhF, 1/79, 1D1019)

323. Lisovets, Yu.P. (1). Propagation theory of high-power optical pulses through a semiconductor under conditions of interband interaction. Fizicheskiy institut AN SSSR. Dissertation, 1978, 13 p. (KLDV, 1/79, p. 240)

324. Lisovets, Yu.P., I.A. Poluektov, and Yu.M. Popov (1). Propagation through a semiconductor, of high-power optical pulses, inducing transitions between bands with different effective masses. KE, no. 1, 1979, 120-126.

325. Pshenitsyn, V.I., V.A. Antonov, and Z.M. Zorin (0). Light reflection from thin conducting layers. OiS, v. 46, no. 2, 1979, 310-316.

D. COMPUTER TECHNOLOGY

326. Akayev, A.A., and M.A. Ashirkulov (0). Synthesis and study of holograms for a permanent holographic computer storage. Sb 7, 235-236. (RZhRadiot, 1/79, 1Ye553)

327. Ayazyan, A.A., L.K. Mamuliya, I.V. Tarshinov, and N.V. Filina (0). Memory for optical holographic storage systems. Sb 7, 233-234. (RZhRadiot, 1/79, 1Ye599)

328. Kibirev, S.F., N.S. Lebedev, S.I. Naymark, P.Ye. Tverdokhleb, and B.N. Pankov (0). Associative search in a photomatrix holographic memory. Sb 7, 270-271. (RZhRadiot, 1/79, 1Ye620)

329. Vasil'yev, A.A., I.N. Kompanets, S.P. Kotova, and V.N. Morozov (0). Associative entry into holographic memories with controlled transparencies. Sb 7, 231-232. (RZhRadiot, 1/79, 1Ye598)

E. HOLOGRAPHY

330. Afanas'yeva, V.L., A.I. Lyubimov, and V.A. Seleznev (0). Forming stepped lines of holographic elements with low values of spatial frequencies. Sb 7, 59-60. (RZhRadiot, 1/79, 1Ye546)

331. Akayev, A.A., B.A. Dzhumabayev, and M.A. Shabdanov (0). Studying the reconstruction process of a Fourier hologram using emission from a semiconductor laser. Sb 7, 237-238. (RZhRadiot, 1/79, 1Ye552)

332. Alimbarashvili, N.A., E.M. Barkhudarov, V.R. Berezovskiy, M.I. Brodzeli, G.G. Dekanozishvili, I.A. Yeligulashvili, M.I. Taktakishvili, and T.Ya. Chelidze (0). Chalcogenide glass as a recording material for IR holograms in the 10.6 μ range. Sb 7, 295-296. (RZhRadiot, 1/79, 1Ye531)

333. Andrenko, S.D., A.Ya. Usikov, and V.P. Shestopalov (84). New method for wavefront reconstruction. DAN SSSR, v. 244, no. 1, 1979, 83-85.

334. Andreyev, Yu.S. (0). Calculating the diffraction efficiency of bleached holograms as a function of exposure. Sb 7, 332-333. (RZhRadiot, 1/79, 1Ye560)

335. Aristov, V.V., and D.A. Tsyrul'nikov (0). Forming an image reconstructed from a three-dimensional hologram in nonmonochromatic radiation. Sb 7, 39-40. (RZhRadiot, 1/79, 1Ye566)

336. Avrorin, A.V., B.A. Breytman, I.I. Brodskiy, V.N. Votintsev, V.M. Gruzinov, Yu.K. Volkov, I.I. Korshever, V.V. Kuznetsov, and I.G. Remel' (0). System for recording long-wave holograms and digital reconstruction of the image. Sb 7, 274-275. (RZhRadiot, 1/79, 1Ye593)

337. Bazhenov, M.Yu. (0). Processing of thermoplastic carriers in real time. Sb 7, 342-343. (RZhRadiot, 1/79, 1Ye532)

338. Bekker, A.M., N.I. Bukhtoyarova, and B.G. Turukhano (0). Optimizing the recording of a hologram-translator. Sb 7, 229-230. (RZhRadiot, 1/79, 1Ye554)

339. Belyakov, L.V., D.N. Goryachev, L.G. Paritskiy, S.M. Ryvkin, and O.M. Sreseli (10). Optical sensitivity of chemically etched semiconductors, and holographic recording of information. Institut fiziki poluprovodnikov SOAN. Preprint, no. 24, 1978, pages not given. (RZhF, 2/29, 2D1375)

340. Bobrov, S.T., G.I. Greysukh, M.A. Prokhorov, Yu.G. Turkevich, and V.G. Shitov (0). Monochromatic aberration in third-order axial holographic lenses. OiS, v. 46, no. 1, 1979, 153-157.

341. Borshch, A.A., M.S. Brodin, and V.I. Volkov (0). New fast-acting device to record dynamic holograms. ZhTF P, no. 4, 1979, 235-238.

342. Borshch, A.A., M.S. Brodin, and V.I. Volkov (0). Using ultrashort pulses to record holographic gratings in SiC. Sb 7, 21-22. (RZhRadiot, 1/79, 1Ye587)

343. Brusin, I.Ya. (0). Aberration-free holographic imaging. Sb 9, 33-50.

344. Bryskin, V.Z., and A.G. Smirnov (0). Method for multiframe holography. Sb 7, 151-152. (RZhRadiot, 1/79, 1Ye541)

345. Denisyuk, Yu.N. (0). Reflecting properties of traveling intensity waves, and their possible applications. ZhTF, no. 1, 1979, 97-100.

346. Denisyuk, Yu.N., A.D. Gal'pern, and A.A. Paramonov (0). Study on the characteristics of holographic systems for reconstructing map information. Sb 7, 176-177. (RZhRadiot, 1/79, 1Ye610)

347. Gel'fer, E.I., and S.N. Mensov (0). Application of optical methods for imaging in the radio-frequency range. Sb 9, 126-144.

348. Gnatovskiy, A.V., A.P. Loginov, N.V. Medved', M.V. Nikolayev, and M.T. Shpak (5). Formation of laser beams with improved space-angular characteristics. KE, no. 2, 1979, 331-336.

349. Gofman, M.A., M.P. Petrov, P.Ye. Tverdokhleb, A.V. Trubetskoy, and A.V. Khomenko (0). Hologram recording in real time using an input device of the PROM type. Sb 7, 209-210. (RZhRadiot, 1/79, 1Ye550)

350. Greysukh, G.I., and S.T. Bobrov (0). Wideband lens-hologram optical system. Sb 7, 55-56. (RZhRadiot, 1/79, 1Ye557)

351. Gubkin, Yu.S. (30). Developing methods to interpret holographic interference patterns. Leningradskiy institut tochnoy mekhaniki i optiki. Dissertation, 1978, 27 p. (KLDV, 2/79, p. 293)

352. Haensel, H. (NS). Dichrome gelatin layer for recording [holographic] information. Journal Signalaufzeichnungsmaterialien, no. 3. 1978, 231-233. (RZhF, 1/79, 1D1520)

353. Indzhiya, F.I., and V.I. Yakovlev (0). Using a complex signal to produce a compensated reference beam during holographic recording of radio-signal spectra. Tr 4, 35-37. (RZhRadiot, 2/79, 2Ye446)

354. Indzhiya, F.I., T.N. Sergeyenko, and V.I. Yakovlev (0). Coherent light sources for holographic radio-signal recording. Tr 4, 102-109. (RZhRadiot, 2/79, 2Ye445)

355. Ivakin, Ye.V., V.G. Koptev, A.M. Lazaruk, and A.S. Rubanov (0). Polarization effects in dynamic holography. Sb 7, 174-175. (RZhRadiot, 1/79, 1Ye565)

356. Karpel'tsev, V.P., and Yu.S. Andreyev (0). Study of the effect of phase distortions in the photomaterial on the output characteristics of a holographic image. Sb 7, 332-333. (RZhRadiot, 1/79, 1Ye561)

357. Keprt, J., M. Hrabovsky, and P. Vejbor (NS). Recording and reconstructing holograms using low-resolution materials. Jemna mechanika a optika, no. 8, 1978, 209-214. (RZhRadiot, 2/79, 2Ye434)

358. Klimin, A.N., V.V. Korsakov, Ye.F. Pen, V.G. Remesnik, and V.G. Tsukerman (0). Nondestructing phase and amplitude holograms on chalcogenide films. Sb 7, 340-341. (RZhRadiot, 1/79, 1Ye574)

359. Klyuchnikov, A.S., A.Ch. Belyachits, F.A. Dergachev, N.I. Kurilo, and I.A. Titovitskiy (0). Forming radioholograms with optical and computer reconstruction of the image. Sb 7, 390-391. (RZhRadiot, 1/79, 1Ye527)

360. Klyuchnikov, A.S., A.P. Makarov, and I.A. Titovitskiy (0). Improving image resolution in computer processing of radioholograms. Sb 7, 392-393. (RZhRadiot, 1/79, 1Ye528)

361. Komissaruk, I.I., N.P. Kutikova, L.T. Mustafina, R.K. Teplova, and R.K. Khakimova (0). Quality of holographic interferograms with increased sensitivity. Sb 7, 307-308. (RZhRadiot, 1/79, 1Ye568)

362. Kostylev, G.D. (0). Nonaberrational properties of holograms recorded by opposed beams, using spatially noncoherent illumination of the object. Sb 7, 198-199. (RZhRadiot, 1/79, 1Ye549)

363. Kovalev, A.A., G.L. Nekrasov, Yu.V. Razvin, and S.V. Serak (0). Reversible recording medium using nematic liquid crystals. Sb 7, 336. (RZhRadiot, 1/79, 1Y-530)

364. Krasnov, A.Ye. (0). Functional properties of volume holograms and their applications. Avtomatika i telemekhanika, no. 11, 1978, 183-187. (RZhRadiot, 2/79, 2Ye488)

365. Kuvshinskiy, N.G., N.I. Sokolov, and L.Ya. Tantsyura (0). Carrier for recording phased holograms. Author's certificate USSR, no. 594478, published 24 March 1978. (RZhRadiot, 2/79, 2Ye449)

366. Kuzin, V.A., and D.I. Stasel'ko (0). Features of recording reflecting holograms of diffusely-scattering objects, using a pulsed ruby laser. Sb 7, 178-179. (RZhRadiot, 1/79, 1Ye579)

367. Kuz'menko, A.V. (0). Synthesis of binary digital holograms, using the method of weighted coding. Sb 7, 272-273. (RZhRadiot, 1/79, 1Ye544)

368. Leshchev, A.A., and V.G. Sidorovich (0). Theory of the reflecting three-dimensional hologram. Sb 7, 49-50. (RZhRadiot, 1/79, 1Ye540)

369. Levin, G.G. (0). Visualization of three-dimensional objects from computer synthesized holograms. OiS, v. 46, no. 2, 1979, 382-385.

370. Markov, V.B. (5). Study of the processes for recording and amplifying optical beams by dynamic holograms in $LiNbO_3$ crystals. Institut fiziki AN UkrSSR. Dissertation, 1978, 19 p. (KLDV, 1/79, p. 241)

371. Merzlyakov, N.S., and L.P. Yaroslavskiy (0). Computer synthesis of colored and multilayer holograms. Sb 7, 278-279. (RZhRadiot, 1/79, 1Ye543)

372. Mustafin, K.S., and V.A. Seleznev (0). Method for obtaining interferograms. Author's certificate USSR, no. 344791, published 16 March 1978. (RZhRadiot, 2/79, 2Ye427)

373. Nakhodkin, N.G., A.V. Kuz'menko, and Yu.V. Koblyanskiy (0). Method for synthesizing relief-phase digital holograms, allowing for properties of the recording medium. Sb 7, 239-240. (RZhRadiot, 1/79, 1Ye577)

374. Nakhodkin, N.G., M.K. Novoselets, and N.I. Sokolov (0). Interaction between a regular signal and "frozen" deformation of thermoplastic media. Sb 7, 293-294. (RZhRadiot, 1/79, 1Ye529)

375. Ozols, A.O. (0). Bleaching kinetics of additively colored KBr crystals as a function of F-light intensity, and hologram recording. IAN Lat, no. 4, 1978, 28-36. (RZhF, 1/79, 1D503)

376. Ozols, A.O. (0). Limit characteristics of amplitude-phase holograms on additively colored KBr crystals. IAN Lat, no. 5, 1978, 16-25. (RZhRadiot, 2/79, 2Ye429)

377. Petrov, M.P., S.I. Stepanov, and V.I. Belotitskiy (4). Device for forming and reconstructing a binary hologram. Author's certificate USSR, no. 496906, published 26 October 1977. (RZhRadiot, 1/79, 1Ye538)

378. Pimenov, Yu.D. (0). Precision of modeling the aberration in holographic optical elements. Sb 7, 97-98. (RZhRadiot, 1/79, 1Ye573)

379. Popova, N.R., and L.P. Yaroslavskiy (0). Speckle contrast and other statisical characteristics of diffuse noise which limit the dimensions and dynamic range of holograms. Sb 7, 280-281. (RZhRadiot, 1/79, 1Ye542)

380. Pryakhin, Yu.A., and Yu.A. Cherkasov (0). Effect of charge carrier drift on the optical transfer function of photothermoplastic layers. ZhNiPFiK, no. 4, 1978, 291-293. (RZhF, 1/79, 1D1522)

381. Rakhmanov, S.K., V.P. Mikhaylov, G.A. Branitskiy, and V.V. Sviridov (0). Hologram recording on spray-coated layers, using physical developing. Sb 7, 297-298. (RZhRadiot, 1/79, 1Ye571)

382. Semenov, G.B., R.R. Gerke, and K.A. Stozharova (0). Features of hologram reconstruction in reflected light. Sb 7, 70-71. (RZhRadiot, 1/79, 1Ye569)

383. Semenov, G.B., I.V. Peysakhson, K.A. Stozharova, and R.R. Gerke (0). Correcting the aberration in concave holographic diffraction gratings. Sb 7, 101-102. (RZhRadiot, 1/79, 1Ye547)

384. Serov, O.B., A.M. Smolovich, and G.A. Sobolev (231). Reduced requirements on resolution of photomaterials, by use of reflecting holograms. ZhNiPFiK, no. 1, 1979, 47-48.

385. Serov, O.B., A.M. Smolovich, and G.A. Sobolev (0). Thin and thick holograms recorded with opposed and coincident beams. Sb 7, 174-175. (RZhRadiot, 1/79, 1Ye567)

386. Shevchenko, S.B., M.A. Petrova, Z.A. Zagorskaya, and G.B. Semenov (0). Bichromized gelatin as a recording medium for volumetric holograms. Sb 7, 313-314. (RZhRadiot, 1/79, 1Ye533)

387. Shtyrkov, Ye.I. (0). Forming nonstationary holograms in a resonant medium, with non-simultaneous action of object and reference waves. Sb 7, 17-18. (RZhRadiot, 1/79, 1Ye588)

388. Slavinskaya, V.N. (0). Multiple holographic imaging. Sb 9, 51-65.

389. Soskin, M.S., and V.B. Taranenko (5). Radiation selector. Author's certificate USSR, no. 597037, published 15 February 1978. (RZhRadiot, 1/79, 1Ye562)

390. Sukhanov, V.I., Yu.V. Ashcheulov, and A.Ye. Petnikov (0). Studying the diffraction efficiency of holograms in $LiNbO_3$ crystals as a function of recording and readout conditions. Sb 7, 37-38. (RZhRadiot, 1/79, 1Ye576)

391. Sukhanov, V.I., G.I. Lashkov, A.Ye. Petnikov, and Yu.V. Ashcheulov (0). Reoksan: a new organic recording material for phased three-dimensional holograms. Sb 7, 309-310. (RZhRadiot, 1/79, 1Ye535)

392. Taranenko, V.B. (0). Volume non-sinusoidal holographic gratings based on bichromized gelatin and second order Bragg diffraction. Sb 7, 76-77. (RZhRadiot, 1/79, 1Ye570)

393. Vakhtangova, L.P., B.I. Shapiro, E.A. Gruz, and K.S. Bogomolov (0). Method for stabilizing phase holograms. Sb 7, 329. (RZhRadiot, 1/79, 1Ye586)

394. Vasil'yev, A.A., P.V. Vashchurin, A.I. Lindulis, I.N. Kompanets, and A.V. Parfenov (0). Image converters and holographic filters based on a semiconductor-liquid crystal structure. Sb 7, 213-214. (RZhRadiot, 1/79, 1Ye551)

395. Vinogradov, A., G. Golenko, L. Zarutskiy, I. Nalimov, Yu. Ovechkis, V. Radkevich, I. Fedchuk, and A. Shakirov (0). Holographic synthesis of volume imaging by stereotransparencies projected on a holographic screen. Sb 18, 324-330. (RZhRadiot, 2/79, 2Ye464)

396. Vlasov, N.G., N.A. Lapshina, R.V. Ryabova, and S.P. Semenov (141). Iridescent holograms reflected by objects. ZhNiPFiK, no. 1, 1979, 48-49.

397. Vorzobova, N.D., and D.I. Stasel'ko (0). Study on characteristics of photomaterials for pulsed holography. Sb 7, 311-312. (RZhRadiot, 1/79, 1Ye534)

398. Yarmosh, N.A., V.K. Yerokhovets, and A.A. Boriskevich (0). Selecting the recording plane for microholograms. IAN B, no. 3, 1978, 91-96. (RZhRadiot, 1/79, 1Ye539)

399. Yembergenov, B., N.Ye. Korsunskaya, Ye.N. Sal'kova, M.S. Soskin, L.G. Sukhoverkhova, and M.K. Sheynkman (0). Study on mechanisms of photochemical reactions in CdS single crystals, and using these reactions for recording holograms. Sb 7, 299-300. (RZhRadiot, 1/79, 1Ye572)

400. Zakin, V.G., and A.V. Shisharin (0). Study of a synthetic aperture antenna. Sb 9, 184-202.

401. Zeylikovich, I.S., and N.M. Spornik (0). Vector shadow method for color images using holograms. OiS, v. 46, no. 2, 1979, 393-394.

F. LASER-INDUCED CHEMICAL REACTIONS

402. Abakumov, G.A., Yu.M. Anisimov, V.F. Pikel'ni, B.I. Polyakov, and A.P. Simonov (122). Photodisintegration of organic compound vapors under pumping by UV pulsed laser radiation. KE, no. 2, 1979, 397-400.

403. Akhmanov, S.A., V.M. Gordiyenko, V.V. Lazarev, A.V. Mikheyenko, and V.Ya. Panchenko (2). Vibrational relaxation of a strongly stimulated molecular gas. IAN Fiz, no. 2, 1979, 379-384.

404. Antonov, V.S., I.N. Knyazev, V.S. Letokhov, V.M. Matyuk, V.G. Movshev, and V.K. Potapov (72,122). Laser spectroscopy of isolated complex molecules in a mass spectrometer, using a stepped photo-ionization process. IAN Fiz, no. 2, 1979, 414-418.

405. Avatkov, O.N., Ye.B. Aslanidi, A.B. Bakhtadze, R.I. Zaynullin, and Yu.S. Turishchev (0). Multiple quantum absorption and the dissociation of hexafluoroacetone in a high-power infrared laser field. KE, no. 2, 1979, 388-391.

406. Bagratashvili, V.N., V.S. Dolzhikov, V.S. Letokhov (72). Kinetics of IR absorption spectra of SF_6 molecules vibrationally excited by an intense CO_2 laser pulse. ZhETF, v. 76, no. 1, 1979, 18-25.

407. Borisevich, N.A., S.I. Blinov, A.V. Dorokhin, G.A. Zalesskaya, and A.A. Kotov (3). High-power pulsed CO_2 laser action on three-molecular diacetyl and benzophenon vapors. IAN Fiz, no. 2, 1979, 393-396.

408. Darmanyan, A.P. (67). Using nanosecond laser photolysis to study energy degradation processes from excited electron states in polymethine dyes. Institut khimicheskoy fiziki AN SSSR. Dissertation, 1978, 19 p. (KLDV, 2/79, p. 235)

409. Delone, N.B., and M.V. Fedorov (1). Polarization of electrons and nuclei during multiphoton resonance ionization of atoms. IAN Fiz, no. 2, 1979, 428-438.

410. Delone, N.B., B.A. Zon, and M.V. Fedorov (1). Polarization of nuclei during resonance ionization of atoms. ZhETF, v. 76, no. 2, 1979, 505-515.

411. Delone, N.B., and M.V. Fedorov (1). Resonance ionization of atoms by intense pulsed laser radiation. Fizicheskiy institut AN SSSR. Preprint, no. 67, 1978, 64 p. (RZhF, 1/79, 1D1409)

412. Gordiyets, B.F., A.I. Osipov, V.Ya. Panchenko (1). Kinetics of molecular gas dissociation under vibrational excitation by laser radiation. Tr 2, 68-109.

413. Karlov, N.V., and S.S. Alimpiyev (1). Collision-free dissociation of polyatomic molecules. IAN Fiz, no. 2, 1979, 366-378.

414. Karlov, N.V., Yu.N. Petrov, A.M. Prokhorov, and I.V. Fedorov (1). Laser action in gas diffusion. IAN Fiz, no. 2, 1979, 389-392.

415. Karlov, N.V., N.A. Karpov, B.B. Krynetskiy, V.A. Mishin, A.M. Prokhorov, and O.M. Stel'makh (1). Study of collision processes during laser isotope separation. IAN Fiz, no. 2, 1979, 405-409.

416. Knyazev, I.N., and V.V. Lobko (72). Multiquantum molecular excitation by IR laser radiation due to weak rotational-vibrational transitions. IAN Fiz, no. 2, 1979, 385-388.

417. Mamedov, Sh.S. (1). Vibrational kinetics methods and their application to molecular lasers and laser chemistry. Tr 2, 3-67.

418. Radloff, W. (NS). Laser spectroscopy method for detecting isotopes. Patent GDR, no. 129235, published 4 January 1978. (RZhRadiot, 1/79, 1Ye496)

419. Samsonov, Yu.N., A.K. Petrov, and Yu.N. Molin (295). Using c-w CO_2 laser radiation to generate and study thermal gas-phase reactions under rigidly homogeneous conditions. Kinetika i kataliz, no. 1, 1979, 17-23.

420. Sochor, V. (Czech). Dynamics of two-photon laser separation of isotopes by parasitic processes. IAN Fiz, no. 2, 1979, 410-413.

421. Velikhov, Ye.P., V.S. Letokhov, A.A. Makarov, and Ye.A. Ryabov (72). Isotope separation by multiphoton molecular dissociation in a high-power CO_2 laser field. Part 1. Prospects of practical realization. KE, no. 2, 1979, 317-326.

G. MEASUREMENT OF LASER PARAMETERS

422. Avtonomov, V.P. (2), R. Alexandrescu, D. Dumitras, and D. Dutu (Romanians). Possible frequency stabilization of a CO_2 laser by an external Stark cell with 1-1 difluorethane. KE, no. 2, 1979, 351-354.

423. Bardyukov, A.M., M.E. Berg, I.F. Grigor'yev, V.V. Kalendin, and V.I. Kukhtevich (0). Determining phase-energy spatial distributions in laser beams. Sb 19, 5-9. (RZhF, 2/79, 2D1300)

424. Danelyan, A.G., and Ye.I. Rabinovich (0). Instrument for measuring the duration of individual optical pulses. Author's certificate USSR, no. 571788, issued 12 October 1977. (RZhMetrolog, 1/79, 1.32.1266)

425. Doronin, V.G., and V.P. Sukhanova (0). Evaluating the average energy characteristics of gas lasers. Deposit at VINITI, no. 153-79, 1979. (Cited in ZhPS, v. 30, no. 2, 1979, 365)

426. Gel'fer, E.I., and Yu.M. Sorokin (0). Two-dimensional optical correlator. Sb 9, 203-215.

427. Gelikonov, V.M., Yu.I. Zaytsev, and G.B. Malikin (426). Self-stabilization effect on the frequency of laser radiation during fast disturbances. KE, no. 2, 1979, 381-383.

428. Grzegorzewski, B. (NS). Information-theoretical method in the study of first-order statistics of a polarized speckle pattern. Acta physica polonica, v. A53, no. 5, 1978, 703-707. (RZhF, 1/79, 1D1566)

429. Kholin, I.V., and A.Yu. Chugunov (3). Measuring the absolute intensities of x-ray spectral lines in the plasma mirror of an electroionization CO_2 laser. Fizicheskiy institut AN SSSR. Preprint, no. 139, 1978, 20 p. (RZhF, 2/79, 2D1233)

430. Kopylov, Yu.L. (15). Interference method for measuring the focal lengths of thermal lenses in active elements of solid-state lasers. PTE, no. 1, 1979, 195-196.

431. Kuzin, V.A., D.I. Stasel'ko, and V.L. Strigun (7). Using a holographic coherometer to study the spatial coherence of ruby laser radiation. OMP, no. 2, 1979, 57-59.

432. Kuzyakov, B.A. (326). Measuring the population of the upper laser level of a CO_2 molecule and the gain in the active medium in a waveguide discharge channel. KE, no. 1, 1979, 114-119.

433. Optoacoustic instrument for measuring pulsed laser radiation energy [developed by the State Optical Institute]. KE, no. 2, 1979, 430-431.

434. Pakhalov, V.B., A.S. Churkin, and F.M. Yusubov (2). Limiting resolution of a polarization interferometer, and measuring the radius of laser beam phase front curvature. KE, no. 1, 1979, 57-62.

435. Percak, H. (NS). Automatic frequency stabilization in gas lasers. Patent Poland, no. 93727, published 15 December 1977. (RZhRadiot, 1/79, 1Ye155)

436. Rabinovich, E.M. (0). Fluctuations of spatial characteristics in laser radiation. RiE, no. 2, 1979, 328-333.

437. Tomov, I.V. (NS). Method for measuring high-power ultrashort optical pulses. Author's certificate Bulgaria, no. 20219, published 29 December 1977. (RZhMetrolog, 1/79, 1.32.1266)

438. Varshavskiy, M.Ya., I.F. Grigor'yev, and V.I. Kukhtevich (0). Measuring the polarization parameters of CO_2 lasers. Sb 19, 19-27. (RZhRadiot, 1/79, 1Ye367)

439. Vasil'yeva, M.A., V.I. Malyshev, and A.V. Masalov (1). Measuring the relaxation time of bleaching dye no. 3955. KSpF, no. 7, 1978, 33-38. (RZhF, 2/79, 2D1303)

440. Vasil'yeva, M.A., V.I. Malyshev, and A.V. Masalov (1). Using bleaching media to measure the duration of coherence in laser radiation. KSpF, no. 7, 1978, 39-43. (RZhF, 2/79, 2D1296)

441. Yefremenko, V.V. (0). Method for restoring energy distribution in a laser beam, using data collected by a bolometric sensor grid. RiE, no. 1, 1979, 193-196.

442. Zabortseva, T.A., A.S. Levchenko, Ye.P. Ostapchenko, and V.A. Stepanov (0). Method for measuring gas discharge pressure. Author's certificate USSR, no. 575517, published 21 November 1977. (RZhRadiot, 1/79, 1Ye386)

443. Zakharchenya, B.P., Ye.I. Terukov, G.P. Skivko, F.A. Chudnovskiy, and Z.I. Shteyngol'ts (4). Display indicator of laser radiation, based on a new thermochromic phase-transformational interference reversible reflector material. ZhTF, no. 2, 1979, 395-398.

444. Zaytsev, Yu.I., and V.G. Gavrilenko (0). Studying gas laser radiation characteristics by means of a traveling wave resonator-interferometer. Sb 9, 11-32.

H. LASER MEASUREMENT APPLICATIONS

1. Direct Measurement by Laser

445. Aginskiy, A.L., and V.N. Boychuk (0). Nondestructive holographic monitoring of the topology of microplates. Sb 7, 103-104. (RZhRadiot, 1/79, 1Ye595)

446. Akimakina, L.V., L.G. Dukareva, and O.B. Serov (0). Study on raster imaging of a holographic portrait. Sb 7, 184-185. (RZhRadiot, 1/79, 1Ye608)

447. Alekseyev, V.P., D.I. Stasel'ko, and A.L. Churayev (0). Holographic device for studying dynamic deformation of objects in shock stand experiments. Sb 7, 113-114. (RZhRadiot, 1/79, 1Ye615)

448. Alikevich, L.Ye., A.V. Goroshkov, A.S. Rubanov, and L.V. Tanin (0). Using holographic microscopy and interferometry to study nerve fibers under stimulated and rest conditions. Sb 7, 105-106. (RZhRadiot, 1/79, 1Ye594)

449. Alimov, O.K., T.T. Basiyev, Yu.K. Voron'ko, and V.S. Fedorov (1). New laser-spectroscopic method for studying solids with inhomogeneously widened spectra. ZhETF P, v. 29, no. 2, 1979, 142-146.

450. Anan'yeva, G.V., V.I. Vasil'yeva, S.V. Danilov, B.O. Mayyer, and V.L. Strigun (0). Study on dynamics of thermooptical distortion in ruby elements, using holographic interferometry methods. Sb 7, 153-154. (RZhRadiot, 1/79, 1Ye592)

451. Andrushchak, Ye.A., G.P. Levinson, and V.P. Tychinskiy (0). Active laser profilograph. Sb 13, 85-90. (RZhRadiot, 2/79, 2Ye376)

452. Andrushchak, Ye.A., and V.P. Tychinskiy (0). Using laser micro-interferometry to study the optical and physical properties of thin films. Sb 13, 91-106. (RZhRadiot, 2/79, 2Ye333)

453. Antipov, A.B., and Yu.N. Ponomarev (0). Effect of pressure in a spectrophone [optoacoustic detector] cell on its sensitivity. ZhPS, v. 30, no. 2, 1979, 362-364.

454. Antonik, A., W. Niedzielski, J. Owsik, L. Szadzinski, and J. Terlecki (NS). Method for synchronizing lasers in picosecond diagnostics of fast-flow processes. BWAT, no. 8, 1978, 109-113. (RZhRadiot, 1/79, 1D1449)

455. Antonov, Ye.N. (72). C-w dye lasers and their use in intraresonator laser spectroscopy. Institut spektroskopii AN SSSR. Dissertation, 1978, 19 p. (KLDV, 2/79, p. 234)

456. Apostol, D. (NS). Interference bands of identical inclination and widths in holographic interferometry. Studii si cercetari de fizica, no. 8, 1978, 779-784. (RZhF, 1/79, 1D1527)

457. Babitskiy, V.I., and A.N. Tresvyatskiy (364). Optomechanical device for a two-coordinate line scan. Author's certificate USSR, no. 610317, published 22 May 1978. (RZhRadiot, 1/79, 1Ye446)

458. Barakov, V.S. (0). Intraresonator spectroscopy. Sb 20, 31-57. (RZhRadiot, 1/79, 1Ye473)

459. Basov, N.G., V.G. Volchkov, I.N. Kompanets, Yu.N. Kulibanov, S.K. Li, E.A. Inatsakanyan, V.N. Morozov, A.V. Parfenov, S.A. Popov, Yu.I. Popov, G.I. Semenov, and B.V. Smelov (1). Fundamentals and methods of designing an optoelectronic processor. Fizicheskiy institut AN SSSR. Preprint, no. 11, 1978, 58 p. (RZhF, 2/79, 2D1664)

460. Belinska, A.A., R.P. Kalnynya, and I.A. Feltyn' (0). Ellipsometric studies of strongly absorbing films on a silicon surface. OiS, v. 46, no. 2, 1979, 317-320.

461. Belkin, V.G., A.S. Klyuchnikov, and P.D. Kukharchik (0). Visualization of the spatially polarized structure of microwave electromagnetic fields. Sb 12, 207-208. (RZhRadiot, 2/79, 2Ye347)

462. Belyayev, A.G., S.V. Milovidova, G.V. Maksimov, I.N. Selinskiy, and V.T. Chernykh (0). Method for calculating the distribution in refractive index in three-dimensional phase objects, using holographic interference patterns. Sb 7, 161-162. (RZhRadiot, 1/79, 1Ye590)

463. Blanter, B.E., and Yu.V. Filatov (0). Experimental study on precision of angular measurement by means of a ring laser. Metrologiya, no. 1, 1979, 3-8.

464. Borovitskaya, N.M., Ye.Yu. Zul'karnayeva, T.P. Kosoburd, F.A. Markus, T.I. Soboleva, and N.V. Sushko (0). Visualization of periodic amplitude and phase structure in Fresnel diffraction zones. Sb 9, 83-98.

465. Borzecki, A., and J. Galus (NS). Comparing holographic methods and projection of periodic lattices, as applied to the study of vibration of various objects. Pomiary, Automatyka, Kontrola, no. 5, 1978, 122-123. (RZhRadiot, 1/79, 1Ye589)

466. Boytsov, V.F. (O). Stability of opposed waves in an optical ring resonator with stopped-down spherical mirrors and a spatially inhomogeneous medium. OiS, v. 46, no. 1, 1979, 202-204.

467. Burmakov, A.P., and V.I. Karaban' (O). Study of holographic methods for use in photolithography of integrated circuits. Sb 7, 78-80. (RZhRadiot, 1/79, 1Ye613)

468. Butuzov, S.Yu., G.B. Semenov, and V.V. Smirnov (O). Study on holographic recording of the eye fundus in a simplified model of the eye. Sb 7, 180. (RZhRadiot, 1/79, 1Ye609)

469. Chlodzinski, J., J. Marczak, J. Owsik, and K. Zuber (NS). Mode-locked laser for diagnostics of fast-flow processes. BWAT, no. 8, 1978, 105-108. (RZhF, 1/79, 1D1501)

470. Denus, S., A. Kasperczuk, S. Kowalski, M. Paduch, T. Pisarczyk, L. Pokora, Z. Wereszczynski, and M. Sadowski (Poles). Multiframe laser interferometric system for studying fast-flow processes. KE, no. 1, 1979, 98-103.

471. Drenckhan, J., E. Ruske, and F. Meyer (NS). Arrangement for optical measurement on the principle of a laser DME. Patent GDR, no. 130803, published 3 May 1978. (RZhRadiot, 2/79, 2Ye352)

472. Dun, A.Z., A.I. Krivoruchko, G.P. Shcherbakov, L.V. Golovina, A.F. Malyy, V.F. Relin, and V.K. Sokolov (O). Cathode ray tube with a noncooled KD_2PO_4 screen, and its use in real-time optical processing of TV images. Sb 7, 207-208. (RZhRadiot, 1/79, 1Ye627)

473. Dushin, L.A. (O). Laser plasma interferometry with photoelectric recording. Sb 20, 75-98. (RZhRadiot, 1/79, 1Ye383)

474. Dzhoglev, D., V.P. Pandurova, V.G. Nikolova, and M.I. Aroyo (NS). Stabilization of precision resistors adjusted with laser beams. Elektropromishlennosti i priborostroene, no. 10, 1978, 380-383. (RZhRadiot, 2/79, 2Ye369)

475. Fuzesi, Z. (Hungarian). Implementing an interference-holographic method for measuring field shift. ZhTF, no. 2, 1979, 399-403.

476. Genbach, A.N., G.V. Maslov, and T.V. Roslyakova (O). Using holographic interferometry to study thermal destruction of rock. Sb 7, 131-132. (RZhRadiot, 1/79, 1Ye611)

477. Gulyayev, S.N., M.M. Butusov, A.I. Ioffe, and N.L. Urvantseva (O). Obtaining holographic multipliers by a method of cumulative nonlinearity. Sb 7, 53-54. (RZhRadiot, 1/79, 1Ye628)

478. Ishchenko, Ye.F., and Ye.F. Reshetin (O). Sensitivity to offset of an optical ring resonator with a focusing element. OiS, v. 46, no. 2, 1979, 366-375.

479. Janowska, B., and J. Szydlowska (NS). Holographic method of vibration study using high-frequency modulation of laser beams. Elek, no. 7, 1978, 302-306. (RZhRadiot, 2/79, 2Ye483)

480. Kalestynski, A., H. Smolinska, and Z. Szyszka (NS). Optical correlator circuit for pattern recognition. Patent Poland, no. 93644, published 15 December 1977. (RZhRadiot, 1/79, 1Ye516)

481. Kalimov, A.G., V.S. Kozlov, O.V. Lobanov, M.V. Stabnikov, V.I. Tarakanov, and M.A. Tombak (O). Recording interactions of charged particles with nuclei in a streak chamber, using laser photography and holography. Sb 7, 111-112. (RZhRadiot, 1/79, 1Ye614)

482. Kamyshan, A.V., Ye.B. Malets, and V.I. Tereshin (O). Complex of quasi-optical 337 μ wavelength components. Sb 12, 161-162. (RZhRadiot, 1/79, 1Ye260)

483. Keprt, J., and V. Hladik (NS). Coherent optical method for measuring the diameter of synthetic fibers. Sb 21, 123-139. (RZhF, 2/79, 2D1654)

484. Keprt, J. (NS). Use of low-resolution recording media in holographic interferometry. Sb 21, 153-159. (RZhF, 2/79, 2D1377)

485. Khandokhin, P.A., and Ya.I. Khanin (O). Spectral features of intensity fluctuation in a solid-state c-w ring laser. ZhTF P, no. 1, 1979, 35-37.

486. Koenig, R., W. Dietel, and W. Grassme (NS). Using dye lasers as a new light source for spectroscopy in science and technology. Part 2. Feingeraetetechnik, no. 9, 402-405. (RZhRadiot, 2/79, 2Ye80)

487. Komar, B.G. (0). Feasibility of developing a holographic motion picture camera, together with systems of stereoscopic and conventional cameras. Sb 7, 171-173. (RZhRadiot, 1/79, 1Ye612)

488. Komissaruk, V.A., V.P. Martynov, and N.P. Mende (4). Application of a diffraction interferometer to a ballistic experiment. PTE, no. 1, 1979, 207-209.

489. Kopilevich, Yu.I., and V.V. Frolov (0). Degree of optical beam coherence and its effect on the ability to study turbulence by optical means. OiS, v. 46, no. 2, 1979, 333-340.

490. Korneyeva, T.V. (0). Means of measuring linear and angular quantities. IT, no. 2, 1979, 63-68.

491. Korolev, N.V., and Ye.M. Men'shikova (0). Interferometer for monitoring the quality of an image according to a diffraction point, and for measuring wave aberrations in optical systems. Author's certificate USSR, no. 569845, published 19 September 1977. (RZhMetrolog, 1/79, 1.32.1323)

492. Kowalski, A., and W. Wisniewski (NS). Laser sensor. Patent Poland, no. 94172, published 31 December 1977. (RZhRadiot, 2/79, 2Ye379)

493. Kozikowska, A. (NS). Holographic method of small particle analysis. Acta geophysica polonica, no. 1, 1978, 3-19. (RZhGeofiz, 1/79, 1B292)

494. Kravchenko, V.I., and Ya.I. Khanin (0). Condensed-media sweep lasers and new possibilities for laser spectroscopy. Sb 22, 182-188. (RZhRadiot, 2/79, 2Ye396)

495. Kuchinskiy, V.V., and A.O. Morozov (0). Spatial coherence of spontaneous emission from cavity light sources. OiS, v. 46, no. 1, 1979, 130-132.

496. Kuhne, G., and K. Raabe (NS). Method and device for distribution analysis of objects according to size and quantity. Patent GDR, no. 129687, published 1 February 1978. (RZhRadiot, 2/79, 2Ye378)

497. Kurbatov, L.N., A.D. Britov, S.M. Karavayev, and S.D. Sivachenko (0). Tunable semiconductor laser for IR spectroscopy. IAN Fiz, no. 2, 1979, 424-427.

498. Lehmann, J., and S. Rentsch (NS). Device for nanosecond absorption spectroscopy. ETP, no. 5, 1978, 465-469. (RZhF, 2/79, 2D1540)

499. Leonas, V.B. (68). New methods for molecular beam study. UFN, v. 27, no. 2, 1979, 319-330.

500. Lukin, A.V., K.S. Mustafin, and R.A. Rafikov (0). Using synthesized holograms to form active mirrors. Sb 7, 163-164. (RZhRadiot, 1/79, 1Ye618)

501. Mass, Ye.I. (0). Using coherent optics to measure the moments of a velocity field [of a turbulent flow]. Sb 23, 24-29. (RZhMekh, 1/79, 1B1149)

502. Mazur, M., and K. Szymocha (0). Laser anemometer. Pomiary, Automatyka, Kontrola, no. 7, 1978, 213-216. (RZhRadiot, 2/79, 2Ye377)

503. Minogin, V.G. (72). Some problems of nonlinear laser spectroscopy of atoms and nuclei. Institut spektroskopii AN SSSR. Dissertation, 1978, 19 p. (KLDV, 2/79, p. 238)

504. Mogil'nitskiy, B.S. (132). Studying the saturation effects in an He-Ne laser at 0.63 μ in order to improve its metrological characteristics and use in laser spectroscopy. Tomskiy GU. Dissertation, 1978, 17 p. (KLDV, 2/79, p. 238)

505. Nesterikhin, Yu.Ye. (75). Activities of the Institute of Automation and Electronics, Siberian Branch of the Academy of Sciences of the USSR [development of laser measuring instruments]. AN SSSR. Vestnik, no. 1, 1979, 3-11.

506. Niehaus, R., and H. Brodkorb (NS). Universal printer for raster imaging of information symbols. Patent GDR, no. 129305, published 3 September 1976. (RZhRadiot, 1/79, 1Ye462)

507. Ostrovskaya, G.V. (0). Holographic plasma diagnostics. Sb 20, 58-74. (RZhRadiot, 1/79, 1Ye633)

508. Petru, F., B. Popela, J. Krsek, and A. Stejskal (NS). Laser interference measurement system. Slaboproudy obzor, no. 10, 1978, 463-471. (RZhRadiot, 2/79, 2Ye375)

509. Quillfeldt, W. (NS). Device for laser spectral analysis. Patent GDR, no. 129372, published 11 January 1978. (RZhRadiot, 1/79, 1Ye469)

510. Razumovskaya, A.I. (29). Using holographic methods for aerophysical studies in ballistic devices. Leningradskiy politekhnicheskiy institut. Dissertation, 1978, 13 p. (KLDV, 2/79, p. 232)

511. Rinkevichyus, B.S. (19). Measuring velocity [of liquid and gas flows] by laser. Priroda, no. 2, 1979, 76-89.

512. Rokos, I.A., and L.A. Rokosova (140). Polarized interferometer. Author's certificate USSR, no. 516303, published 18 January 1978. (RZhRadiot, 1/79, 1Ye474)

513. Rokos, I.A., and L.A. Rokosova (0). Four-beam polarized interferometer. Author's certificate USSR, no. 558579, published 24 December 1977. (RZhRadiot, 2/79, 2Ye479)

514. Sapozhnikov, A.I., B.I. Fedorov, and A.V. Shtayn (0). Reflectivity of underlying surfaces at 3.39 μ. ZhPS, v. 30, no. 2, 1979, 335-338.

515. Sardyko, V.I. (3). Ring laser radiation spectrum control by means of active medium phase anisotropy induced by a magnetic field. KE, no. 1, 1979, 158-168.

516. Sardyko, V.I. (0). Polarization and frequency diversity of opposed waves in a ring laser with an anisotropic resonator. ZhPS, v. 30, no. 1, 1979, 61-73.

517. Schejbal, V. (NS). Determining near-field antenna characteristics by means of holographic methods. Slaboproudy obzor, no. 9, 1978, 403-407. (RZhRadiot, 2/79, 2Ye452)

518. Schiffer, F., R. Ziermann, and W. Bornkessel (NS). Laser applications in production. Bild und Ton, no. 8, 1978, 229-232. (RZhRadiot, 1/79, 1Ye448)

519. Shpak, I.V., and A.V. Solomin (0). Effect of the index of refraction of media on the splitting of natural rotating ring resonator frequencies. OiS, v. 46, no. 1, 1979, 133-138.

520. Shreyder, Ye.Ya. (0). Laser fluorescent method for determining normal hydrogen atom concentration in a high-temperature plasma. Sb 20, 127-138. (RZhRadiot, 1/79, 1Ye418)

521. Smirnov, V.V., and T.Ya. Kal'nitskaya (0). Increasing the image visibility in a fiber endoscope with a holographic corrector. Sb 7, 72-73. (RZhRadiot, 1/79, 1Ye617)

522. Sobolev, V.S., and V.I. Titkov (75). Tracking filter-demodulator for measuring signal frequency in Doppler velocimeters. Author's certificate USSR, no. 570183, published 7 October 1977. (RZhRadiot, 1/79, 1Ye452)

523. Sorokin, V.V., and Ye.K. Galanov (0). Standard measures for magnetooptical rotation of a polarization plane in the IR spectral region. IT, no. 2, 1979, 15-16.

524. Soskin, M.S., and V.B. Taranenko (0). Holographic selector-telescope. ZhTF P, no. 2, 1979, 99-103.

525. Stasel'ko, D.I., and B.O. Mayyer (0). Holographic method for measuring the phase of coherence functions. Sb 7, 109-110. (RZhRadiot, 1/79, 1Ye616)

526. Sukhman, Ye.P. (0). Pulsed laser for imaging in holographic motion picture films. Sb 7, 330-331. (RZhRadiot, 1/79, 1Ye626)

527. Tiunov, Ye.A. (12). Effect of decoupled elements on elliptical polarization of opposed waves in a gas ring laser. IVUZ Radiofiz, no. 1, 1979, 62-65.

528. Toporets, A.S. (7). Light reflection from rough surfaces. OMP, no. 1, 1979, 34-46.

529. Tychinskiy, V.P., V.P. Babenko, and V.L. Pankov (0). Precise laser measurement of microdisplacements. Sb 13, 107-121. (RZhRadiot, 2/79, 2Ye374)

530. Uglanova, V.V., S.N. Marova (116). Incoherent storage of pulsed optical signals with random time delay [at lidar stations]. Tr 6, 49-55. (RZhRadiot, 1/79, 1Ye432)

531. Wolinski, W. (NS). Progress in the field of emission sources and methods for coupling them to integrated circuitry. Elek, no. 10, 1978, 407-414. (RZhF, 2/79, 2D1666)

532. Vodzinskiy, A.I., and Yu.V. Tovmach (0). Using holography to study two-phase flows. Sb 24, 80-84. (RZhMekh, 2/79, 2B1157)

533. Yakobi, Yu.A. (0). Optical methods for studying gas flows. Sb 20, 3-30. (RZhMekh, 2/79, 2B1147)

534. Zaretskiy, D.F., N.V. Karlov, B.B. Krynetskiy, V.V. Lomonosov, and V.A. Mishin (1). Laser detection of neutrons. KSpF, no. 7, 1978, 18-20. (RZhF, 2/79, 2D1329)

535. Zemskov, K.I., M.A. Kazaryan, T.I. Pekhoshkina, and A.N. Trofimov (1). Projection system with an intensity amplifier using copper chloride vapors. KE, no. 2, 1979, 391-394.

536. Zeylikovich, I.S., and N.M. Spornik (0). Vector shading method for color imaging using holograms. Sb 7, 107-108. (RZhRadiot, 1/79, 1Ye622)

537. Zverev, V.A., Ye.Yu. Zul'karnayeva, and F.A. Markus (0). Optical analyzer for spatial spectra. Sb 9, 66-82.

2. Laser-Excited Optical Effects

538. Akimov, A.V., S.A. Basun, A.A. Kaplyanskiy, V.A. Rachin, and R.A. Titov (0). Electron-phonon interaction in activated crystals, studied by means of fluorescent detection of resonant phonon pulses. Sb 1, 130-138.

539. Angert, N.B., N.A. Anisimov, N.M. Belyy, I.S. Gorban', V.A. Gubanov, and N.V. Nazarova (0). Raman scattering of light in $PbMoO_4$ single crystals. FTT, no. 8, 1978, 2540-2542. (RZhF, 1/79, 1D559)

540. Anzin, V.B., Yu.V. Kosichkin, Yu.I. Mazur, and A.I. Nadezhdinskiy (1). Photoconductivity of tellurium under pulsed excitation. FTT, no. 2, 1979, 377-382.

541. Augustovs, P.A., and K.K. Shvarts (0). Effect of an external electric field and light intensity on photorefraction in $LiNbO_3$. IAN Lat, no. 5, 1978, 10-12. (RZhRadiot, 2/79, 2Ye349)

542. Badalyan, A.M., A.A. Dabagyan, M.Ye. Movsesyan, R.Ye. Movsesyan, and M.L. Ter-Mikaelyan (59). Change in magnetic properties of potassium and rubidium vapors under laser radiation. IAN Fiz, no. 2, 1979, 304-308.

543. Bagayev, V.S., L.I. Paduchikh, V.B. Stopachinskiy, R.G. Khakimov, and L. Stourach (1). Photoluminescence of GeS. FTT, no. 2, 1979, 398-400.

544. Baltrameyunas, R.A., V.P. Gribkovskiy, V.A. Ivanov, E.P. Kuokshtis, V.V. Parashchuk, and G.P. Yablonskiy (0). Luminescence in ZnS single crystals under laser and electric field excitation. ZhPS, v. 30, no. 1, 1979, 161-163.

545. Basiyev, T.T., Yu.K. Voron'ko, and A.M. Prokhorov (0). Using selective laser excitation to study the structure of inhomogeneously broadened spectra of rare-earth ions and electron excitation migration according to an inhomogeneous profile. Sb 1, 83-96.

546. Bayev, V.M., V.F. Gamaliy, B.D. Lobanov, Ye.F. Martinovich, E.A. Sviridenkov, A.F. Suchkov, and V.M. Khulugurov (1). Intraresonator spectroscopy by lasers using color centers in alkali-halide crystals. KE, no. 1, 1979, 92-97.

547. Belousov, A.V., V.A. Kovarskiy, and E.P. Sinyavskiy (44). Secondary emission spectrum of a localized electron interacting with nonequilibrium vibrations. FTT, no. 2, 1979, 433-437.

548. Belyayev, V.A., Yu.F. Biryulin, A.D. Bondarev, Ye.I. Leonov, O.A. Lupal, and Yu.V. Shmartsev (0). Optical properties of bismuth silicate $Bi_{12}SiO_{20}$ doped with neodymium. ZhTF P, no. 19, 1978, 1189-1193. (RZhF, 2/79, 2D884)

549. Borshch, V.V., M.P. Lisitsa, P.Ye. Mozol', and I.V. Fekeshgazi (6). Self-induced rotation of the polarization plane in class 422 crystals. IAN Fiz, no. 2, 1979, 296-298.

550. Bredikhin, V.I., V.N. Genkin, A.M. Miller, and L.V. Soustov (0). Photoelectric effect in KDP and DKDP crystals under the effect of laser radiation. IAN Fiz, no. 2, 1979, 309-312.

551. Bukharayev, A.A., and N.R. Yafayev (0). Tracing diffraction gratings in iron-activated glass by means of UV laser radiation. ZhTF P, no. 4, 1979, 247-250.

552. Ferber, R.S. (109). Using laser optical pumping to determine the relaxation constants and cross-sections of Na_2 and K_2 in the electron ground state. IAN Fiz, no. 2, 1979, 419-423.

553. Gribkovskiy, V.P., V.F. Zhitar', L.C. Zimin, S.I. Radautsan, V.Ya. Raylyan, and N.K. Samuylova (0). Absorption saturation in $ZnIn_2S_4$ single crystals. ZhPS, v. 30, no. 2, 1979, 353-354.

554. Kaliski, S. (NS). Interpretation of laser radiation pressure as applied to electron-positron pair generation. BWAT, no. 10, 1978, 3-6. (RZhRadiot, 2/79, 2Ye325)

555. Karmanovskiy, N.S. (0). Study of the optical properties of light reflection in V_2 films. Sb 14, 9-12. (RZhRadiot, 2/79, 2Ye346)

556. Kovarskiy, V.A., I.Sh. Averbukh, A.V. Belousov, N.F. Perel'man, E.P. Sinyavskiy, and V.N. Chebotar' (44). Electron transitions in molecules in a laser field. IAN Fiz, no. 2, 1979, 319-331.

557. Kostin, A.K., V.V. Savel'yev, and A.V. Vannikov (0). Free charges and excitons in stilbene single crystals excited by electron pulses. Physica status solidi, v. B87, no. 1, 1978, 255-259. (RZhF, 1/79, 1D532)

558. Lelyakov, A.V. (44). Exciton absorption in AgBr crystals under high levels of excitation. FTT, no. 2, 1979, 622-625.

559. Linnik, L.F., and L.G. Linnik (6). Absorption of IR radiation by nonequilibrium holes in germanium under laser excitation. Sb 3, 106-110.

560. Malov, M.M., and V.P. Kutepova (0). Optical properties of zinc oxide powder. ZhPS, v. 30, no. 1, 1979, 134-136.

561. Marinyuk, V.V., R.M. Lazorenko-Manevich, and Ya.M. Kolotyrkin (0). Resonance Raman scattering of organic cations absorbed by silver. DAN SSSR, v. 242, no. 6, 1978, 1382-1385. (RZhF, 2/79, 2D493)

562. Murin, V.A., V.F. Mandzhikov, and V.A. Barachevskiy (0). Spectral relation of the photocoloration process of photochromic spiropyrans. OiS, v. 45, no. 2, 1978, 399-401. (RZhF, 1/79, 1D993)

563. Petrov, V.I., Ya.S. Bobovich, and A.V. Bortkevich (0). Secondary emission spectra of dyes pumped by high-power radiation in various absorption bands. OiS, v. 46, no. 2, 1979, 274-283.

564. Ryvkin, B.S. (0). Vibrational volt-ampere characteristics of photoconductive parallel plates exposed to lasers. ZhTF P, no. 2, 1979, 65-69.

565. Vodop'yanov, L.K., L.V. Golubev, Yu.A. Aleshchenko, K.R. Allakhverdiyev, and E.Yu. Salayev (0). Raman spectra in InSe crystals. FiT, no. 9, 1978, 2803-2805. (RZhF, 2/79, 2D560)

566. Zhukova, N.I., A.P. Kazantsev, and V.P. Sokolov (1,73). Bound states of atoms in a resonant light field. KE, no. 2, 1979, 363-364.

J. BEAM-TARGET INTERACTION

1. Metal Targets

567. Ageyev, V.P., A.I. Barchukov, F.F. Bunkin, V.I. Konov, S.B. Puzhayev, A.S. Silenok, and N.I. Chapliyev (1). Heating of metals by pulsed CO_2 laser radiation. KE, no. 1, 1979, 78-85.

568. Arzuov, M.I., F.V. Bunkin, N.A. Kirichenko, V.I. Konov, and B.S. Luk'yanchuk (0). Oxidation temperature of metals under pulsed CO_2 laser radiation. ZhTF P, no. 4, 1979, 193-196.

569. Azizov, S.T., P.U. Arifov, A.V. Kovalenko, V.B. Lugovskoy, G.A. Pyrin, and T.S. Khaustova (202). Charged particle emission from the action of a scanned laser beam on metals. ZhTF, no. 2, 1979, 415-418.

570. Dimitrov, G., and A. Petrakiev (NS). Effect of the gas medium on crater formation and microplasma from the action of laser radiation on metal targets. Sb 10, 205-212. (RZhF, 2/79, 2D1259)

571. Dlugunovich, V.A. (0). Determining metal surface temperatures under laser heating. FiKhOM, no. 1, 1979, 27-30.

572. Kolesnikov-Svinarev, V.I., G.P. Kuznetsov, and O.I. Leypunskiy (0). Study on burning of aluminum droplets in the weightless state. FGiV, no. 5, 1978, 146-148.

573. Korotchenko, A.I., A.A. Samokhin, and A.B. Uspenskiy (1). Absorptive behavior in metals exposed to laser radiation. KE, no. 1, 1979, 210-217.

574. Korotchenko, A.I., A.A. Samokhin, and A.B. Uspenskiy (1). Establishing a stationary regime of metal vaporization by optical radiation. KSpF, no. 7, 1978, 8-11. (RZhF, 2/79, 2D1256)

575. Lyubov, B.Ya., and E.N. Sobol' (0). Thermal models of metal surface vaporization under concentrated energy flux. FiKhOM, no. 1, 1979, 12-26.

576. Sukhov, L.T., and G.Ye. Zolotukhin (0). Laser atomization during analysis of thin metal layers. ZhPS, v. 30, no. 1, 1979, 11-14.

577. Zhiryakov, B.M., N.I. Popov, and A.A. Samokhin (0). Effect of plasma on the interaction of laser radiation with metals. Cited in FiKhOM, no. 1, 1979, 142.

2. Dielectric Targets

578. Arushanov, S.Z. (98). Destruction of transparent anisotropic single crystals by nanosecond laser pulses. NII yadernoy fiziki pri MGU. Dissertation, 1978, 17 p. (KLDV, 1/79, p. 235)

579. Ashmarin, I.I., A.I. Andreyev, Yu.A. Bykovskiy, V.A. Gridin, and Ya.Yu. Zysin (16). Laser breakdown in crystalline argon as a model of high-energy fast-flow processes. KE, no. 1, 1979, 86-91.

580. Bakharev, M.S., A.A. Gorbachev, R.R. Larina, and L.I. Mirkin (0). Annealing of radiation defects in glass from the effect of laser irradiation. Deposit at VINITI, no. 2984-78, 5 September 1978, 8 p. (RZhF, 2/79, 2D1267)

581. Dement'yev, A.S., E.K. Maldutis, and S.V. Sakalauskas (50). Induced optical anisotropy in glass by intensive laser radiation. Sb 3, 62-76.

582. Gomelauri, G.V., and A.A. Manenkov (1). Study on the damage to crystals exposed to $CaF_2:Er^{3+}$ laser radiation at 2.75 μ. KE, no. 1, 1979, 45-48.

583. Kask, N.Ye., V.V. Radchenko, G.M. Fedorov, and D.B. Chopornyak (98). Temperature dependence of the optical glass absorption coefficient on exposure to laser radiation. KE, no. 2, 1979, 337-344.

584. Kosolobov, S.N., R.I. Sokolovskiy, and Ye.L. Tyurin (10). Effect of optical pulse patterns on optical destruction thresholds of transparent dielectrics. IVUZ Fiz, no. 2, 1979, 77-81.

585. Min'ko, L.Ya., V.K. Goncharov, and A.N. Loparev (0). Study on reflected radiation during laser destruction of opaque dielectrics. FiKhOM, no. 1, 1979, 31-36.

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BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS, NUMBER 39, JANUARY --ETC(U)
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2. Semiconductor Targets

586. Brodin, M.S., and S.G. Shevel' (5). Interaction of conventional and laser radiation on mixed $Zn_xCd_{1-x}S$ single crystals (review). Sb 3, 3-28.

587. Bykova, T.T., E.F. Lazneva, A.F. Tavasiyev, and Yu.V. Chebrakov (12). Study of the processes produced by the interaction of laser radiation and cadmium selenide surfaces under high vacuum conditions. Leningradskiy universitet. Vestnik, no. 16, 1978, 61-66. (RZhF, 2/79, 2Ye746)

588. Dneprovskiy, V.G., and V.N. Bankov (0). Using laser radiation to obtain thin-film layers in a vacuum. Zarubezhnaya radioelektronika, no. 9, 1978, 144. (RZhRadiot, 1/79, 1Ye459)

589. Plyatsko, G.V., S.G. Kiyak, M.I. Moysa, and A.F. Semizorov (303). Imperfections in the crystal structure of CdSb single crystals caused by laser radiation. DAN Ukr, 61-64.

3. Miscellaneous Studies

590. Apostol, I., V. Ghiordanescu, I.N. Mihailescu, I. Nistor, G. Ieona, S.V. Nistor, V. Teodorescu, and M. Voda (NS). Properties of alkali halide crystals used in optical elements of high-power lasers. Studii si cercetari de fizica, no. 6, 1978, 601-618. (RZhF, 2/79, 2D1269)

591. Bondarenko, A.V., V.S. Golubev, Ye.V. Dan'shchikov, F.V. Lebedev, A.F. Nastoyashchiy, and A.V. Ryazanov (0). Breakdown of air near laser target surfaces. ZhTF P, no. 4, 1979, 221-224.

592. Bukatyy, V.I., V.A. Pogodayev, and D.P. Chaporov (0). Dynamics of a solid microparticle in a pulsed laser radiation field. ZhPMTF, no. 1, 1979, 30-34.

593. Gorshkov, B.G., A.S. Yepifanov, and A.A. Manenkov (1). Avalanche ionization in solids under large-quantum radiation, and the relative role of multiphoton ionization in laser destruction. ZhETF, v. 76, no. 2, 1979, 617-629.

594. Kalinin, M.I. (140). Resonant interaction of stochastic e-m radiation with matter. IVUZ Radiofiz, no. 1, 1979, 116-118.

595. Lysikov, Yu.I., Fam Van Man', and Chan Tuan An' (424). Effect of absorption coefficient fluctuations on the heating of a weakly absorbing medium by intense optical radiation. IFZh, v. 36, no. 2, 1979, 327-330.

596. Medvedev, Yu.A., and Ye.V. Metelkin (141). Effect of recombination processes on the development of avalanche ionization in material under intense optical beam irradiation. ZhTF, no. 2, 1979, 323-332.

597. Paneva, A., A. Petrakiev, G. Dimitrov, and L. Georgieva (NS). Effect of a pulsed synchronous discharge on crater formation during laser microanalysis. Sb 10, 213-220. (RZhF, 2/79, 2D1333)

598. Pozdnyak, N.I., and V.S. Myl'nikov (0). Using c-w CO_2 laser radiation to deposit dielectric films. ZhTF, no. 1, 1979, 186-189.

599. Rykalin, N.N., A.A. Uglov, and I.V. Zuyev (0). Preparing films and coatings with concentrated energy sources. FiKhOM, no. 1, 1979, 3-11.

600. Vinogradov, B.A. (475). Studying the performance of a c-w CO_2 laser in a textile pattern cutting regime in order to improve the industrial process. Leningradskiy institut tekstil'noy i legkoy promyshlennosti. Dissertation, 1978, 23 p. (KLDV, 1/79, p. 288)

K. PLASMA GENERATION AND DIAGNOSTICS

601. Ageyev, V.P., A.I. Barchukov, V.I. Konov, T.M. Murina, P.I. Nikitin, A.M. Prokhorov, A.S. Silenok, and N.I. Chapliyev (1). Electric field of an optical breakdown plasma in air. ZhETF, v. 76, no. 1, 1979, 158-163.

602. Aleksandrov, A.F., S.Yu. Galuzo, A.T. Savichev, and I.B. Timofeyev (2). Using a scanning laser to study the spatial distribution of the absorption coefficient of a high-power discharge plasma. Sb 25, 90-97.

603. Aliyev, Yu.M., O.M. Gradov, D. Zyunder, and A.Yu. Kiriy (0). Parametric modulation of the density of a laser plasma near a critical surface. ZhETF P, v. 28, no. 7, 1978, 448-452. (RZhF, 1/79, 1G266)

604. Andronov, V.A., S.M. Bakhrakh, V.N. Mokhov, V.V. Nikiforov, and A.V. Pevnitskiy (0). Effect of turbulent mixing on compression of laser targets. ZhETF P, v. 29, no. 1, 1979, 62-65.

605. Basov, N.G., J. Wolowski, E. Woryna, S. Denus, Yu.A. Zakharenkov, S. Kaliski, G.V. Sklizkov, J. Farny, and A.S. Shikanov (1). Energy spectrum and directivity of plasma ions in spherical targets irradiated by high-power laser radiation. Fizicheskiy institut AN SSSR. Preprint, no. 194, 1978, 24 p. (RZhF, 2/79, 2G201)

606. Baykov, O.G., V.I. Bayanov, A.A. Mak, R.N. Medvedev, V.A. Serebryakov, and N.A. Solov'yev (7). Study of reflection from inclined incident laser radiation on plasma. ZhETF P, v. 29, no. 1, 1979, 44-47.

607. Bespalov, V.Ye., V.K. Gryaznov, and V.Ye. Fortov (67). Radiation from a shock-compressed high-pressure argon plasma. ZhETF, v. 76, no. 1, 1979, 140-147.

608. Boyko, V.A., V.A. Danilychev, S.A. Pikuz, A.Ya. Fayenov, I.V. Kholin, and A.Yu. Chugunov (1). Nonequilibrium ionization of a laser plasma heated by 10.6 μ radiation. ZhTF, no. 1, 1979, 189-191.

609. Burakov, V.S., N.G. Kondrashov, and A.A. Stavrov (0). Interaction of pulsed laser radiation and finely dispersed carbon particles in a plasma. Cited in FiKhOM, no. 1, 1979, 142-143.

610. Bykovskiy, Yu.A., V.L. Kantsyrev, and Yu.P. Kozyrev (16). Some features of the emission of soft x-rays from a laser plasma under moderate intensities of laser radiation at the target. KE, no. 2, 1979, 414-417.

611. Bykovskiy, Yu.A., Yu.P. Kozyrev, A.I. Suslov, B.Yu. Sharkov, and G.A. Sheroziya (O). Multicharged ion emission from a CO_2 laser plasma. ZhTF P, no. 1, 1979, 42-45.

612. Gekker, I.R. (O). Eighth European Conference on Controlled Fusion and Plasma Physics, Prague, September 1977. Atomnaya tekhnika za rubezhom, no. 7, 1978, 13-17. (RZhF, 1/79, 1G226)

613. Gil'denburg, V.B., A.G. Litvak, and G.M. Frayman (O). Deformation of the density profile and efficiency of resonance absorption of laser radiation in an inhomogeneous plasma. ZhETF, v. 28, no. 7, 1978, 433-436. (RZhF, 1/79, 1G267)

614. Golubev, V.S., and V.N. Snopko (O). Spectroscopic study of helium breakdown near laser targets. ZhPS, v. 30, no. 1, 1979, 22-27.

615. Kaliski, S. (NS). Neutron generation in a plane system by means of explosive implosion of a variable density shell. BAPS, no. 3, 1978, 247-251. (RZhMekh, 1/79, 1B255)

616. Kaliski, S. (NS). Neutron generation in a conical body of deuterium by means of explosive implosion of a variable density shell. BAPS, no. 3, 1978, 253-258. (RZhMekh, 1/79, 1B256)

617. Kaliski, S. (NS). Approximate evaluation of concentric continuously profiled, explosive critical compression of a plasma. BWAT, no. 2, 1978, 13-18. (RZhMekh, 1/79, 1B253)

618. Kaliski, S. (NS). Explosive implosion of a layered shell into a compressed plasma region. BWAT, no. 6, 1978, 9-16. (RZhMekh, 1/79, 1B254)

619. Kolerov, A.N., V.S. Mamaykin, and G.D. Petrov (140). Using a homodyne submillimeter laser interferometer to determine electron concentration in a plasma. Sb 25, 159-161.

620. Kozlov, G.I. (17). Study on gas breakdown from pulsed CO_2 laser radiation. ZhTF, no. 1, 1979, 67-75.

621. Komissarova, I.I., and G.V. Ostrovskaya (0). Using the method of dispersive holographic interferometry to study a laser spark. Sb 7, 159-160. (RZhRadiot, 1/79, 1Ye591)

622. Kutikov, A.A., Yu.A. Medvedev, V.M. Sorokin, B.M. Stepanov, and G.V. Fedorovich (0). Electromagnetic fields originating during metal evaporation at a laser focus. ZhPMTF, no. 1, 1979, 25-29.

623. Kutovoy, V.D., G.D. Petrov, P.A. Samarskiy, S.I. Tregubov (0). Compensating submillimeter interferometer for optical diagnostics of a dense plasma. IT, no. 2, 1979, 18-19.

624. Mak, A.A. (7). Problems in constructing laser devices for generating high-temperature plasma. OMP, no. 1, 1979, 5-9.

625. Nemchinov, I.V., A.I. Petrukhin, V.A. Rybakov, V.M. Khazins, and V.V. Shuvalov (276). Onset of optical detonation from an optical combustion wave. DAN SSSR, v. 244, no. 4, 1979, 877-880.

626. Rumyantsev, A.A., and A.V. Kulakov (29). Strong α-radiation reactions and laser thermonuclear fusion. ZhTF, no. 1, 1979, 219-220.

627. Vedenov, A.A., and G.G. Gladush (0). Theoretical study of the onset of a plasma flare during laser processing of materials. Cited in FiKhOM, no. 1, 1979, 143.

628. Yundev, D.N. (74). Apparatus for submillimeter laser diagnostics of low-temperature plasma. Sb 25, 162-172

III. MONOGRAPHS, BOOKS, CONFERENCE PROCEEDINGS

629. Bakhrakh, L.D., and G.A. Gavrilov (0). Golografiya (Holography). Novoye v zhizni, nauke, tekhnike. Seriya Fizika, no. 6, Moskva, Znaniye, 1979, 64 p.

630. Bakhrakh, L.D., and A.P. Kurochkin (0). Golografiya v mikrovolnovoy tekhnike (Holography in microwave technology). Moskva, Sovetskoye radio, 1979, 320 p.

631. Bokut', B.V., and V.V. Filippov (0). Dostizheniya fizicheskoy optiki v Belorussii (Advances in physical optics in Belorussia). Minsk, Nauka i tekhnika, 1979, 88 p.

632. Dunskaya, I.M. (0). Lazery i khimiya (Lasers and chemistry). Moskva, Nauka, 1979, 163 p.

633. Gekker, I.R. (0). Vzaimodeystviye sil'nykh elektromagnitnykh poley s plazmoy (Interaction of strong electromagnetic fields and plasma). Moskva, Atomizdat, 1978, 311 p.

634. Gordov, Ye.P., and S.D. Tvorogov (0). Kvantovaya teoriya rasprostraneniya elektromagnitnogo polya (Quantum theory for the propagation of an electromagnetic field). Novosibirsk, Nauka, 1978, 173 p. (KL, 7/79, 6204)

635. Lazernaya diagnostika plazmy. Materialy mezhdunarodnogo shkoly-seminara, Minsk, sentyabr' 1978 (Laser diagnostics of plasma. Papers of the international seminar, Minsk, September 1978). Minsk, 1978, 142 p. (RZhRadiot, 1/79, 1Ye415)

636. Manykin, E.A. (16). Vzaimodeystviye izlucheniya s veshchestvom (Interaction of radiation with matter). Part 1. Moskovskiy inzhenerno-fizicheskiy institut, 1978, 95 p. (KL, 6/79, 5190)

637. Molekulyarnaya kinetika, molekulyarnyye lazery i lazerokhimiya (Molecular kinetics, molecular lasers and laser chemistry). Fizicheskiy institut AN SSSR. Trudy, no. 107, 1978, 196 p.

638. Nauchno-tekhnicheskiy seminar "Fazovyye i polyarizatsionnyye izmereniya lazernogo izlucheniya i ikh metrologicheskoye obespecheniye". Tezisy dokladov (Scientific and Technical Seminar on Phase and Polarization Measurements of Laser Radiation and Their Metrological Accuracy Control. Summaries of the reports). Moskva, 1978, 78 p. (RZhMetrolog, 1/79, 1.32.1252)

639. Petrun'kin, V.Yu. (29). Osnovy teorii priborov kvantovoy elektroniki (Fundamentals of the theory of quantum electronics instruments). Leningradskiy politekhnicheskiy institut, 1978, 67 p. (KL, 8/79, 7395)

640. Pikhtelev, A.I., A.I. Ul'yanov, A.A. Fateyev, G.P. Pashev, V.A. Logachev, Yu.V. Timofeyev, E.V. Zuyev, G.F. Nadtochiy, and V.N. Zaytsev (0). Standarty chastoty i vremeni na osnove kvantovykh generatorov i diskriminatorov (Frequency and time standards based on lasers and discriminators). Moskva, Sovetskoye radio, 1978, 303 p. (RZhF, 2/79, 2Zh41)

641. Plastinin, V.V. (0). Gazorazryadnyye istochniki vozbuzhdeniya sveta (Gas discharge sources for optical excitation). Tomsk, Tomskiy universitet, 1978, 159 p. (RZhF, 1/79, 1D1702)

642. Problemy sovremennoy radiotekhniki i elektroniki. Tom 2. Issledovaniya v oblasti elektroniki i volokonnoy optiki (Current problems in radiotechnology and electronics. Vol. 2. Studies in electronics and fiber optics). Moskva, 1978, 224 p. (RZhRadiot, 1/79, 1Ye293)

643. Spektroskopiya kristallov (Spectroscopy of crystals). Leningrad, Nauka, 1978, 192 p.

644. Stepanov, B.I. (O). Kvantovaya elektronika (Quantum electronics [in the Belorussian Academy of Sciences]). Minsk, Nauka i tekhnika, 1979, 120 p.

645. Stepanov, B.M., ed. (140). Metrologicheskoye obespecheniye fazovykh i polyarizatsionnykh izmereniy v kogerentnoy optike (Metrological accuracy control for phase and polarization measurements in coherent optics). VNII fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy. Nauchnyye trudy, 1978, 78 p. (RZhRadiot, 1/79, 1Ye366)

646. Sushchinskiy, M.M. (O). Kombinatsionnoye rasseyaniye (Raman scattering). Novoye v zhizni, nauke, tekhnike. Seriya Fizika, no. 6, Moskva, Znaniye, 1978, 64 p. (KL, 6/79, 5191)

647. Toropov, A.K., ed. (163). Issledovaniya v oblasti izmereniy spektral'nykh kharakteristik OKG (Research in measuring the spectral characteristics of lasers). Trudy metrologicheskikh institutov SSSR. VNII metrologii, no. 220(280), 1977, 98 p. (KL, 1/79, 477)

648. Vazhneyshiye rezul'taty nauchno-issledovatel'skikh rabot 1977 goda (The most important results in scientific research for 1977). Moskva, Nauka, 1978, 120 p. (RZhF, 1/79, 1G458)

649. Volkovitskiy, O.A., ed. (0). Vsesoyuznoye soveshchaniye po rasprostraneniyu opticheskogo izlucheniya v dispersnoy srede, Obninsk, 4-6 oktyabr' 1978. Materialy (All-Union Conference on the Propagation of Optical Radiation in a Dispersed Medium, Obninsk, 4-6 October 1978. Papers). Moskva, Gidrometeoizdat, 1978, 330 p. (RZhF, 2/79, 2D938)

650. Zverev, V.A., and N.S. Stepanov, eds. (0). Eksperimental'naya radiooptika (Experimental radiooptics). Moskva, Nauka, 1979, 256 p.

IV. SOURCE ABBREVIATIONS

	(CIRC Codens)	
BAPS	(BAPTA)	Bulletin de l'Academie Polonaise des Sciences. Serie des Sciences Techniques
BWAT	(BWATA)	Biuletyn Wojskowej akademii technicznej J. Dabrowskiego
DAN B	(DBLRA)	Akademiya nauk Belorusskoy SSR. Doklady
DAN SSSR	(DANKA)	Akademiya nauk SSSR. Doklady
DAN Ukr	(DUKAB)	Akademiya nauk Ukrayins'koyi RSR. Dopovidi. Seriya A. Fizyko-matematychni ta tekhnichni nauky
Elek	(EKNTB)	Elektronika [Poland]
ETP	(EXPPA)	Experimentelle Technik der Physik
FGiV	(FGVZA)	Fizika goreniya i vzryva
FiKhOM	(FKOMA)	Fizika i khimiya obrabotka materialov
FTT	(FTVTA)	Fizika tverdogo tela
IAN Arm	(IAAFA)	Akademiya nauk Armyanskoy SSR. Izvestiya. Fizika
IAN B	(VABFA)	Akademiya nauk Belorusskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk
IAN Fiz	(IANFA)	Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya
IAN Lat	(LZFTA)	Akademiya nauk Latviyskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk
IFZh	(INFZA)	Inzhenerno-fizicheskiy zhurnal
IT	(IZTEA)	Izmeritel'naya tekhnika
IVUZ Fiz	(IVUFA)	Izvestiya vysshikh uchebnykh zavedeniy. Fizika
IVUZ Radioelektr	(IVUZB)	Izvestiya vysshikh uchebnykh zavedeniy. Radioelektronika
IVUZ Radiofiz	(IVYRA)	Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika
KE	(KVEKA)	Kvantovaya elektronika
KL	(KNLTA)	Knizhnaya letopis'
KLDV	(KLDVA)	Knizhnaya letopis'. Dopolnitel'nyy vypusk
KSpF	(KRSFA)	Kratkiye soobshcheniya po fizike

NM	(IVNMA)	Akademiya nauk SSSR. Izvestiya. Neorganicheskiye materialy
OiS	(OPSPA)	Optika i spektroskopiya
OMP	(OPMPA)	Optiko-mekhanicheskaya promyshlennost'
PTE	(PRTEA)	Pribory i tekhnika eksperimenta
RiE	(RAELA)	Radiotekhnika i elektronika
RZhF	(RZFZA)	Referativnyy zhurnal. Fizika
RZhGeofiz	(GZGFA)	Referativnyy zhurnal. Geofizika
RZhMekh	(RZMKA)	Referativnyy zhurnal. Mekhanika
RZhMetrolog	(RZMIB)	Referativnyy zhurnal. Metrologiya i izmeritel'naya tekhnika
RZhRadiot	(RZRAB)	Referativnyy zhurnal. Radiotekhnika
Sb1	Sbornik	Spektroskopiya kristallov. Leningrad, Nauka, 1978.
Sb2		Azerbaydzhanskaya mezhvuznaya konferentsiya po fizike. 4th. 1978. Tezisy dokladov. Baku, 1978.
Sb3		Kvantovaya elektronika, no. 15, Kiyev, 1978.
Sb4		Inzhenernyye voprosy magnitnoy gidrodinamiki. Kiyev, 1978.
Sb5		Gazdinamicheskiye lazery i lazernaya fotokhimiya. Lektsii, prochitannyye v Shkole molodykh uchenykh MGU, Azau, April 1976. Moskva, 1978.
Sb6		Khimiya plazmy, no. 5, 1978.
Sb7		Vsesoyuznaya konferentsiya po golografii. 3rd. Ul'yanovsk, 1978. Tezisy dokladov. Leningrad, 1978.
Sb8		Problemy sovremenoy radiotekhniki i elektroniki, v. 2, 1978.
Sb9		Eksperimental'naya radiooptika. Moskva, Nauka, 1979.
Sb10		Godishnik na Sofiiskiya universitet. Fizicheski fakultet, no. 66, 1974-1975 (1978).
Sb11		Vsesoyuznaya konferentsiya Problemy izucheniya upravlyayemykh parametrami lazernogo izlucheniya. 1st. Tashkent, 1978. Tezisy dokladov, part 2. Tashkent, 1978.

Sb12		Vsesoyuznyy simpozium po millimetrovskim i submillimetrovskim volnam. 2nd. Khar'kov, 1978. Tezisy dokladov, v. 2, Khar'kov, 1978.
Sb13		Novyye elementy v informatsionnykh sistemakh, Moskva, 1977.
Sb14		Voprosy issledovaniya i razrabotka tochnykh sistem priborostroyeniya. Leningrad, 1978.
Sb15		Vsesoyuznaya konferentsiya po rasprostraneniyu radiovoln. 12th. Tomsk, 1978. Part 2. Tezisy dokladov. Moskva, 1978.
Sb16		Voprosy teoreticheskoy i eksperimental'noy fiziki. Alma-Ata, 1978.
Sb17		Priborostroyeniye, no. 25, Kiyev, 1978.
Sb18		Kongress UNIATEK [Union Internationale des Associations Techniques Cinematographiques]. 12th. Moskva, 1976. Trudy. Moskva, no date of publication.
Sb19		Metrologicheskoye obespecheniye fazovykh i polyarizatsionnykh izmereniy v kogerentnoy optike. Moskva, 1978.
Sb20		Lazernaya diagnostika plazmy. Materialy mezhdunarodnogo shkoly-seminara. Minsk, 1978.
Sb21		Acta Universitatis palackianae olomucensis. Facultas rerum naturalium. Physica, (Olomouc), v. 53, 1977.
Sb22		Spektroskopiya molekul i kristallov. Kiyev, 1978.
Sb23		Eksperimental'nyye issledovaniya inzhenernykh sooruzheniy. Moskva, 1978.
Sb24		Nauchnaya konferentsiya Moskovskogo fiziko-tekhnicheskogo instituta. 22nd. 1976. Seriya Aerofizika i prikladnoy matematiki. Trudy. Dolgoprudnyy, 1977.
Sb25		Diagnostika nizkotemperaturnoy plazmy. Moskva, 1979.
Tr1	Trudy	VNII monokristallov, ststintilliyatsionnykh materialov i osobo chistykh khimicheskikh veshchestv. Sbornik nauchnykh trudov, no. 1, 1978.
Tr2		Fizicheskiy institut AN SSSR. Trudy, no. 107, 1978.
Tr3		VNII gosudarstvennoy patentnoy ekspertizy. Trudy, no. 9, section 3, 1978.
Tr4		Trudy uchebnykh institutov svyazi. Avtomaticheskaya kommutatsiya i telefoniya. Leningrad, 1978.
Tr5		Tsentral'naya vysotnaya gidrometeorologicheskaya observatoriya. Trudy, no. 11, 1978.

Tr6		Moskovskiy aviatsionny institut. Tematicheskiy sbornik nauchnykh trudov, no. 431, 1978.
TVT	(TVTYA)	Teplofizika vysokikh temperatur
UFN	(UFNAA)	Uspekhi fizicheskikh nauk
UFZh	(UFIZA)	Ukrainskiy fizicheskiy zhurnal
VMU	(VMUFA)	Moskovskiy universitet. Vestnik. Fizika, astronomiya
ZhETF	(ZEIFA)	Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhETF P	(ZFPRA)	Pis'ma v Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhNiPFiK	(ZNPFA)	Zhurnal nauchnoy i prikladnoy fotografii i kinematografii
ZhPMTF	(ZPMFA)	Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki
ZhPS	(ZPSBA)	Zhurnal prikladnoy spektroskopii
ZhTF	(ZTEFA)	Zhurnal tekhnicheskoy fiziki
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